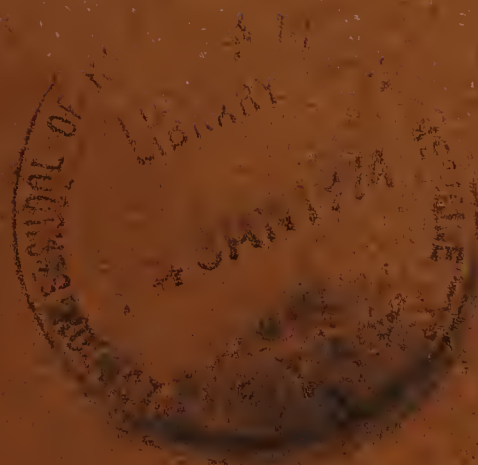


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**STAFFORDSHIRE COUNTY COUNCIL**

**REPORT**

**OF THE**

**MEDICAL OFFICER OF HEALTH**

**For the Year 1972**





**STAFFORDSHIRE COUNTY COUNCIL**

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# **REPORT**

OF THE

**MEDICAL OFFICER OF HEALTH**

**For the Year 1972**

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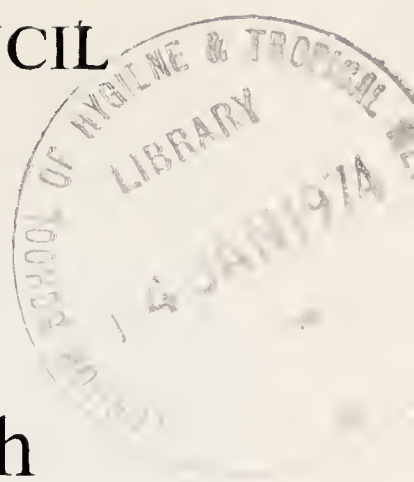


# STAFFORDSHIRE COUNTY COUNCIL

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## Annual Report of Medical Officer of Health

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### FOREWORD

The retirement of Dr. Gerald Ramage at the end of the period covered by the present report brought to an end his long association with the Staffordshire County Council spanning almost the whole era of the National Health Service in its familiar form. Many tributes have been paid to his distinguished service to the County and his major contribution to the development of the preventive health services through links with various influential organisations in this country and on the continent. The series of annual reports for which Dr. Ramage has been responsible constitutes an impressive record of the advances achieved during his period of office and must be a source of considerable satisfaction to him in retirement. It has been a privilege to work with him and to share with other members of staff in the development of the service, which has continued unabated despite the imminence of reorganisation.

Turning now to the present report, it is noted that a fall is recorded in the number of births and in the birth rate in the County for 1972. The latter remains in excess of the national rate as a consequence of the composition of the local population, though the gap has narrowed. It will be appreciated that the birth rate is influenced by many factors, but the establishment of a direct family planning service in the County, with considerable expansion in clinic coverage and the provision of a mobile unit to facilitate attendance, has undoubtedly played its part.

The infant mortality rates generally compare favourably with those for England and Wales as a whole and it is particularly pleasing to note a marked reduction in illegitimate infant deaths in view of concern to ensure a uniformly high standard of service despite the problems posed by social deprivation.

Staffordshire experienced in 1972 the widespread increase in the death rate, which has been attributed mainly to exceptional weather conditions and to an influenza epidemic in the last quarter of the year. Heart disease and cancer continue to account for more than half of all deaths in the County. Almost one third of the deaths from ischaemic heart disease (coronary occlusion) occur under the age of 65 years and approximately one half of deaths due to carcinoma of the lung, which is responsible for about a quarter of all cancer deaths, are again in this age group. It is clear that, as has been stressed so often, much of this sad and premature loss of human life and potential could readily be avoided if only the public could

be persuaded to abandon smoking and adopt a more healthy life style. It is a continuing challenge, deserving of a high priority, that more effective methods of health education should be evolved. Details of the wide range of activities undertaken by the health education section are included in the report.

The report affords a detailed record of the work of the County Health Department in 1972 and reference is made to a number of interesting developments. The mounting work load of the ambulance service led to an appraisal of the work undertaken, from which it became apparent that many outpatients and day patients did not require the services of qualified ambulance personnel or fully equipped vehicles and that their needs could be met equally effectively and more economically by a special service. Consequently, an outpatients transport section was duly established during the year and is already proving its value. There is the further advantage that more highly skilled staff are able to restrict themselves to the care of the more seriously disabled and ill patients and become more expert in this field. The completion of the building programme, which provided for purpose built ambulance stations at strategic situations throughout the County, is also noteworthy.

Child health clinics continue to be well attended and screening tests ensure that any failure of developmental progress or sensory defects are identified at an early stage, so ensuring full investigation and appropriate treatment at the optimum time. The health visiting staff have achieved a high level of expertise in screening techniques after in-service training and check the progress at home of those infants whose mothers cannot be induced to attend the clinics—a group meriting particular attention.

Progress on the Health Centre development programme has been disappointing and many projects have suffered considerable delays because of siting problems. It is particularly frustrating at the time of preparing this report that a number of health centres, for which the need is acute, have been deferred by the Department of Health and Social Security on financial grounds just as all the local issues had been resolved. The forbearance and understanding of general practitioners, despite their often extremely difficult circumstances, is much appreciated.

Staffing of the chiropody service remains something of a problem, though there was some improvement as compared with the previous year. The introduction of chiropodial attendants to facilitate the work of chiropodists constitutes an advance and has contributed, with the improved staffing level, to the substantial increase in treatments reported. In the course of the year the department, at the request of the Social Services Committee, assumed responsibility for chiropody in the residential homes for the elderly and it is anticipated that an improvement will result from the greater resources so made available.

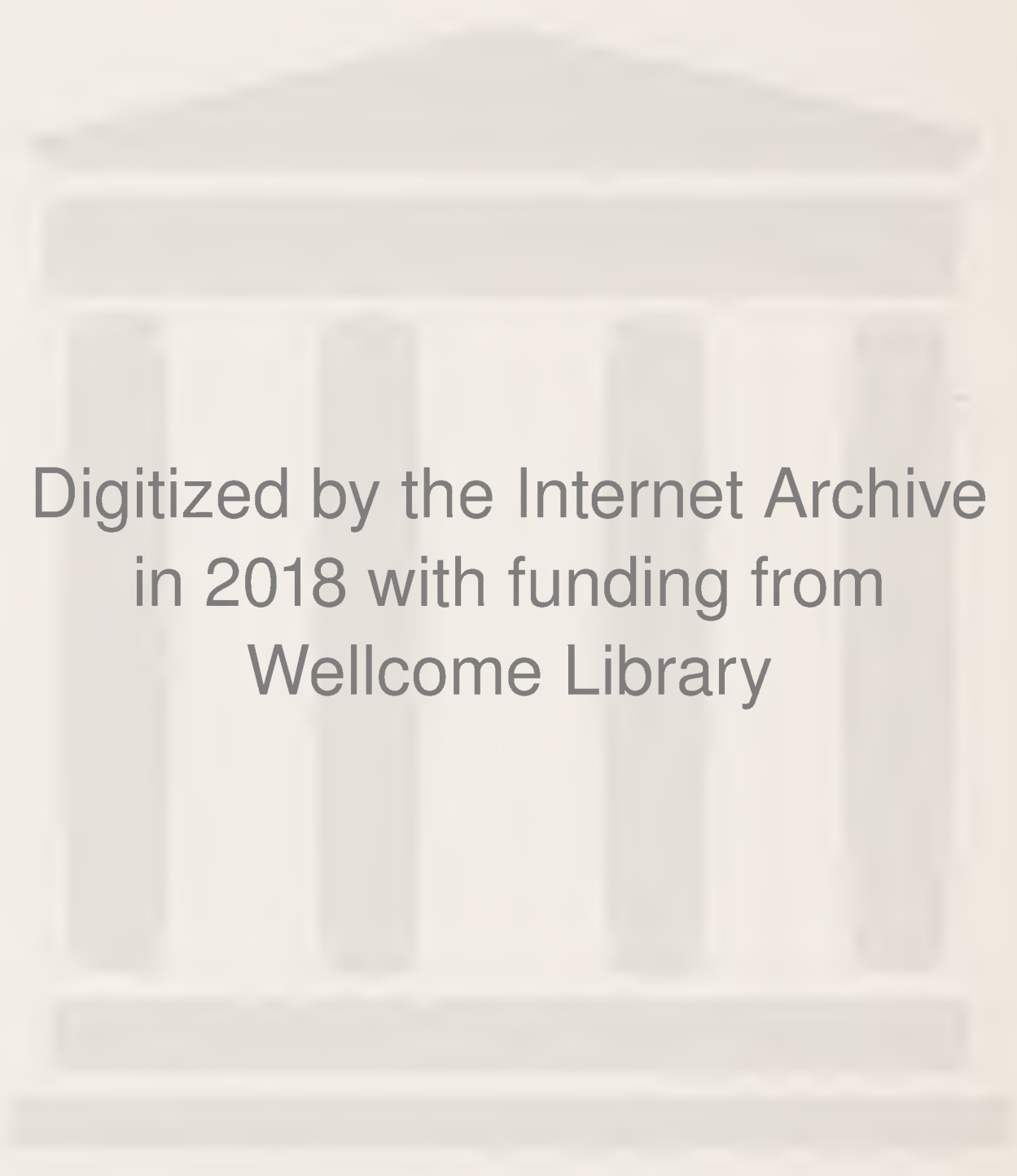
Agreement was reached during the year to a Mayston form of nursing management structure which is to be implemented in 1973 and should prove a useful preliminary to unification of the service the following year. A substantial increase in nursing staff, with phased introduction commencing in the year 1973-74, was also approved in recognition of the mounting domiciliary work load which is the inevitable consequence of the present policy, with its emphasis on care in the community. The rapidly developing links with general medical practitioners and the hospital



service are, of course, ensuring the realization of this commendable objective. A considerable degree of functional integration has, indeed, been achieved and augurs well for the future when, following reorganisation, a fully integrated service should emerge. There is a great deal of preparatory work to be undertaken by existing authorities prior to the Appointed Day in order to ensure a smooth changeover with no temporary deterioration in the standard of service and to expedite the expected improvements. The additional pressure was being felt towards the end of the year under review and has been increasing steadily. It is a tribute to the staff that the extra duties have been accepted cheerfully and carried out most efficiently despite other preoccupations and the personal uncertainties created by reorganisation. The efforts of the staff involved are greatly appreciated.

I should also like to express my appreciation to all other members of staff who have continued to give of their best and have maintained the high standard of service. The co-operation of fellow Chief Officers and the staff of their departments is also gratefully acknowledged. Finally, I would thank Miss Grace Joules, the Chairman of the County Health Committee, the Vice-Chairman and the Chairmen of Sub-Committees for their courtesy and support.

H. H. JOHN,  
*County Medical Officer of Health.*



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# SECTION 1

COMMITTEES

STAFF

# COMMITTEES

The Committee of the County Council concerned with local health services is the Health Committee.

The County Medical Officer also acts as medical adviser to all Committees of the County Council.

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## HEALTH COMMITTEE

*as at 31st December, 1972*

*Chairman* — COUNCILLOR MISS G. JOULES

*Vice-Chairman* — COUNCILLOR H. DEAKIN, Esq.

*Ex-Officio Members—*

Alderman	F. J. OXFORD	<i>Chairman of the County Council</i>
„	C. H. JONES	<i>Vice-Chairman of the County Council</i>
Councillor	A. L. GARRATT	<i>Chairman of the Finance Committee</i>
„	G. H. HARRIS	<i>Vice-Chairman of the Finance Committee</i>

Alderman	T. S. BARLOW	Councillor	J. T. MEIR
„	Mrs. H. M. GARDNER	„	W. NEWBURY
„	G. McEVOY	„	J. R. PAUL, M.B.E., M.C.
„	A. NEEDHAM	„	G. A. POOLE
„	F. N. SALMON, O.B.E.	„	L. POOLE
„	W. F. TRACY	„	A. E. RICHARDSON
		„	K. V. RUSHTON
Councillor	G. CORK	„	Mrs. M. J. STUBBS
„	L. M. DENT	„	B. G. VERNON
„	S. EVANS	„	A. WALKER-HALL
„	I. J. C. FRIEND	„	Mrs. S. H. WILLIAMS
„	B. A. GARMAN, T.D.	„	R. F. WRIGHT
„	Mrs. J. K. HANCOCK	„	A. G. WYATT
„	T. HINE		

# PRINCIPAL OFFICERS

## *County Medical Officer of Health*

G. RAMAGE, M.A. (Admin.), M.D., CH.B., B.SC., M.R.C.S., L.R.C.P., D.P.H.

## *Deputy County Medical Officer of Health*

H. H. JOHN, M.A., M.B., B.CHIR., M.R.C.S., L.R.C.P., D.P.H., D.C.H.,  
D.OBST. R.C.O.G., F.F.C.M.

## *Principal Medical Officer for Maternity and Child Welfare*

MAIRIDH A. M. N. GILLATT, M.B., CH. B., D.P.H., D.R.C.O.G.

## *Senior Administrative Medical Officer for Schools*

A. BLENCH, L.R.C.P., L.R.C.S., L.R.F.P.S., D.P.H.

## *Principal Medical Officer for Mental Health*

W. JOHNSON, M.R.C.S., L.R.C.P.

## *Senior Medical Officer*

H. E. WILSON, M.B., CH.B., D.O., D.P.H.

## *Administrative Medical Officers:*

C. E. JAMISON, M.B., B.CH., B.A.O., D.P.H.

W. D. H. McFARLAND, M.B., B.CH., B.A.O., D.P.H.

J. TOLLAND, L.R.C.P., L.R.C.S., L.R.F.P.S., D.P.H.

R. WEBSTER, M.B., CH.B., D.T.M. & H., D.P.H.

*County Analyst:*

R. S. HATFULL, F.R.I.C., F.R.S.H.

*County Dental Officer:*

W. McKAY, L.D.S., R.C.S. (EDIN.)

*County Health Inspector:*

H. PREST, F.I.P.H.E., M.A.P.H.I.

*County Ambulance Officer:*

R. G. YATES, F.I.A.O., F.I.C.A.P.

*County Nursing Officer:*

MISS M. S. NEWMAN, S.R.N., S.C.M.,  
M.T.D., H.V. CERT.

*Chief Chiropodist:*

M. E. ABLOTT, M.CH.S., S.R.CH.

*Health Education Officer:*

M. J. HEAD, CERT.ED., DIP.P.E.

## *Chief Administrative Assistant*

N. F. GREENWOOD

## *Chief Clerk*

E. D. ROWLEY, A.C.I.S., D.M.A.





# **SECTION II**

**STATISTICAL AND GENERAL INFORMATION**

**STATISTICS RELATING TO ADMINISTRATIVE  
COUNTY**

**EXTRACT FROM VITAL STATISTICS FOR 1972**

**AREA AND POPULATION**

**STATISTICS RELATING TO:—**

**CANCER**

**TUBERCULOSIS**

**CHIEF CAUSES OF DEATH**

**BIRTHS**

**DEATHS**

**GENERAL TABLES**

## STATISTICS

Area of Administrative County (1966)	.. .. (acres)	657,20 <sup>n</sup>
Estimated Home Population of Area 1972 (primarily for Calculation of Birth- and Death-rates or incidence of Notifiable Diseases)	.. .. .	751,640
Rateable Value at 1st April, 1972 (General County Purposes)	.. .. .	£27,982,355
Estimated net product of 1p Rate, 1972-73	.. ..	£279,438

## EXTRACT FROM VITAL STATISTICS FOR 1972

### Live Births:

Number	.. .. .	12,342
Rate per 1,000 population	.. .. .	16.4
Illegitimate Live Births (per cent of total live births)		5

### Stillbirths:

Number	.. .. .	157
Rate per 1,000 total live and still births	.. ..	12.6

Total Live and Still Births	.. .. .	12,49 <sup>9</sup>
-----------------------------	---------	--------------------

Infant Deaths (deaths under one year)	.. .. .	197
---------------------------------------	---------	-----

### Infant Mortality Rates:

Total infant deaths per 1,000 total live births	..	16
Legitimate infant deaths per 1,000 legitimate live births	.. .. .	16
Illegitimate infant deaths per 1,000 illegitimate live births	.. .. .	15

Neo-natal Mortality Rate (deaths under four weeks per 1,000 total live births)	.. .. .	12
--	---------	----

Early Neo-natal Mortality Rate (deaths under one week per 1,000 total live births)	.. .. .	10
--	---------	----

Perinatal Mortality Rate (still births and deaths under one week combined per 1,000 total live and still births)	..	22.9
--	----	------

### Maternal Mortality (including abortion):

Number of deaths	.. .. .	3
Rate per 1,000 total live and still births	.. ..	0.24

## OTHER EXTRACTS FROM VITAL STATISTICS OF THE YEAR

Deaths (all ages)	.. .. .	7,274
Death Rate	.. .. .	9.7
Deaths from Cancer (all ages) (excluding leukaemia)	..	1,326

For comparison purposes, similar statistics are given for England and Wales in the following table:

**VITAL STATISTICS — 1972**  
**ENGLAND AND WALES — PERSONS**  
 Estimated Mid-Year Home Population 49,028,900  
*(provisional data)*

	Number	Rate	
Live Births .. .. .	725,405	14.8	per 1,000 population
Stillbirths .. .. .	8,794	12.0	per 1,000 total births
Deaths .. .. .	591,907	12.1	per 1,000 population
Infant Mortality (deaths under 1 yr. of age) .. .. .	12,494	17.0	per 1,000 live births
Neonatal Mortality (deaths under 4 wks. of age) .. .. .	8,373	12.0	per 1,000 live births
Early Neonatal Mortality (deaths under 1 wk. of age) .. .. .	7,142	10.0	per 1,000 live births
Perinatal Mortality (stillbirths and deaths under 1 wk. of age) .. .. .	15,936	22.0	per 1,000 total births

**AREA AND POPULATION**

The administrative county of Staffordshire covers an area of 657,200 acres (266,000 hectares) and contains within its 22 local authorities a population of 751,640 (1972). The population of these authorities are:

*Municipal Boroughs:*

Lichfield .. .. .	23,180
Newcastle-under-Lyme .. .. .	76,900
Stafford .. .. .	54,530
Tamworth .. .. .	43,830

*Urban Districts:*

Aldridge—Brownhills .. .. .	88,810
Biddulph .. .. .	17,980
Cannock .. .. .	56,230
Kidsgrove .. .. .	22,290
Leek .. .. .	19,340
Rugeley .. .. .	23,570
Stone .. .. .	10,970
Uttoxeter .. .. .	9,080

*Rural Districts:*

Cannock .. .. .	45,180
Cheadle .. .. .	40,970
Leek .. .. .	13,120
Lichfield .. .. .	61,030
Newcastle-under-Lyme .. .. .	22,080
Seisdon .. .. .	39,230
Stafford .. .. .	24,660
Stone .. .. .	21,700
Tutbury .. .. .	25,030
Uttoxeter .. .. .	11,930

Staffordshire embraces a wide variety of physical and economic features all of which combine to give the County its diverse nature. The topography of the County extends from the high millstone grit, sandstone and limestone areas in the north-east across the low-lying valleys of the Trent and its tributaries, and gently rises again to the south-west. Economically and physically the County can be split into four major areas.

1. The north-eastern uplands. This district contains the highest areas of Staffordshire. Its agricultural economy is dictated by the physical features of the area and extensive stock-breeding is the major type of farming. Leek is the major centre of the area, acting as its market town and providing other employment in its textile industry.
2. North and North-West Staffordshire. This area, surrounding the Potteries conurbation, is intimately related with the North Staffordshire Coalfield and the Pottery Industry. The area consists for the most part of nineteenth century industrial towns and villages, some of which combined in 1910 to form what is now the City of Stoke-on-Trent. Despite redevelopment and new industries the area still retains much of its early industrial atmosphere.
3. The plain of the Trent and the lower valleys of its tributaries. These areas are composed of low-lying agricultural land, over-looked by Cannock Chase, a high sandy area which is extensively forested. A group of old market towns, Stafford, Rugeley, Lichfield, and Tamworth form a north-west—south-east line across the area. These towns, together with Uttoxeter have undergone considerable industrial expansion in this century and are important employment centres.
4. The Conurbation fringes. These include part of the South Staffordshire coalfield and a number of rural areas. Despite the decline of coalmining the mining villages and towns have expanded with an influx of new industries and new population, many of whom commute to the Conurbation. In particular Aldridge-Brownhills, Cannock and Wombourne have grown as new industrial and commuter settlements.





In the following table the census population of the Administrative County for 1971 and the estimated home population for mid-1972 are set out.

	<i>Census 1971</i>	<i>Estimated Population Mid-1972</i>
Urban .. ..	440,856	446,710
Rural .. ..	296,020	304,930
Totals .. ..	736,876	751,640



# THE GEOGRAPHICAL COUNTY



KEY	
County Boroughs	
Urban Districts	
Municipal Boroughs	
Rural Districts	
County Boroughs are not included in the Administrative County	

## CANCER

In the following table the deaths from Cancer, excluding those from Leukaemia (39) and Benign and Unspecified Neoplasms (10), during 1972 are shown according to age grouping and sex.

Age Groups	URBAN DISTRICTS			RURAL DISTRICTS			Grand Total
	Male	Female	Total	Male	Female	Total	
0— .. ..	—	1	1	—	—	—	1
1— .. ..	1	2	3	1	—	1	4
5— .. ..	4	—	4	—	—	—	4
15— .. ..	1	2	3	1	—	1	4
25— .. ..	6	4	10	3	2	5	15
35— .. ..	13	14	27	3	11	14	41
45— .. ..	39	44	83	37	28	65	148
55— .. ..	135	69	204	77	61	138	342
65— .. ..	173	115	288	87	74	161	449
75— .. .	78	117	195	56	67	123	318
TOTALS .. ..	450	368	818	265	243	508	1,326

As can be seen from the table the total number of deaths from these forms of cancer during 1972 was 1,326, an increase of 60 from the 1971 figure or a 4.7% increase.

During 1972 this group of deaths accounted for 18% of the total civilian deaths in the County.

The table following shows the deaths from breast cancer and cancer of the uterus for the last five years:—

<i>Year</i>	<i>Breast Cancer</i>	<i>Cancer of Uterus</i>
1968	115	68
1969	94	46
1970	135	52
1971	145	49
1972	118	59

## LUNG CANCER

The total number of lung cancer deaths in the County for 1972 was 320, or 23% of the total number of deaths from all forms of this disease. This represents an increase of 39 from the 1971 figure. Of the 320 deaths, 273 were males and 47 were females, the percentage male deaths being 85%.

The following table shows the lung cancer deaths according to age grouping and sex.

Age Groups	URBAN DISTRICTS			RURAL DISTRICTS			Grand Total
	Male	Female	Total	Male	Female	Total	
0— .. ..	—	—	—	—	—	—	—
1— .. ..	—	—	—	—	—	—	—
5— .. ..	—	—	—	—	—	—	—
15— .. ..	—	—	—	—	—	—	—
25— .. ..	1	—	1	—	—	—	1
35— .. ..	3	1	4	—	1	1	5
45— .. ..	12	5	17	18	3	21	38
55— .. ..	64	9	73	31	9	40	113
65— .. ..	74	9	83	42	4	46	129
75 and over ..	18	2	20	10	4	14	34
TOTALS .. ..	172	26	198	101	21	122	320

## TUBERCULOSIS

The following table shows new cases of tuberculosis notified during 1972 within the County Districts, and deaths from the disease, classified according to age and sex:—

1972				NEW CASES				DEATHS			
AGE PERIODS				Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmonary	
				M.	F.	M.	F.	M.	F.	M.	F.
0—	..	..	..	—	—	—	—	—	—	—	—
1—	..	..	..	—	1	—	—	—	—	—	—
2—	..	..	..	—	—	—	1	—	—	—	—
5—	..	..	..	—	1	—	—	—	—	—	—
10—	..	..	..	—	—	—	—	—	—	—	—
15—	..	..	..	2	—	—	1	—	—	—	—
20—	..	..	..	3	1	—	—	—	—	—	—
25—	..	..	..	5	3	—	4	—	—	—	—
35—	..	..	..	3	—	—	1	—	—	—	—
45—	..	..	..	7	2	1	—	—	—	—	1
55—	..	..	..	6	7	1	—	1	—	—	1
65—	..	..	..	4	1	1	—	3	—	—	—
75 and upwards	..	..	..	—	2	—	1	1	—	—	1
Age unknown	..	..	..	—	—	—	—	—	—	—	—
TOTALS .. ..				30	18	3	8	5	—	—	3

During 1972, 5 deaths occurred from pulmonary tuberculosis and 3 from other forms of this disease, the death-rate being 0.01.

### REGISTERS OF DISTRICT MEDICAL OFFICERS OF HEALTH

At the end of the year the following cases were included in the registers of the Medical Officers for the County:—

TOTAL CASES	PULMONARY			NON-PULMONARY		
	M.	F.	Total	M.	F.	Total
1,981	916	737	1,653	147	181	328

The figures given above indicate that in 1972 there was one case of tuberculosis in every 379 persons, or 2.6 per 1,000 of the population.



The following table gives particulars of primary notifications of tuberculosis notified in the Administrative County each year since 1921, together with the case-rates per 1,000 of the estimated population. Only from 1946 is it possible to divide these figures to show numbers of respiratory and non-respiratory notifications, and the appropriate case-rates are given:—

Year	PRIMARY NOTIFICATIONS			CASE RATE PER 1,000 OF THE POPULATION		
	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis	Tuberculosis (all forms)	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis	Tuberculosis (all forms)
1921			929			1.29
1922			971			1.37
1923			1,029			1.45
1924			974			1.36
1925			1,232			1.71
1926			1,400			1.93
1927			1,106			1.55
1928			1,194			1.68
1929			1,017			1.43
1930			1,021			1.44
1931			1,129			1.59
1932			1,074			1.50
1933			1,011			1.41
1934			929			1.29
1935			825			1.14
1936			831			1.14
1937			858			1.16
1938			789			1.05
1939			726			0.95
1940			669			0.88
1941			788			1.01
1942			830			1.07
1943			841			1.09
1944			798			1.03
1945			769			1.00
1946	636	139	775	0.80	0.17	0.97
1947	681	132	813	0.84	0.16	1.00
1948	728	124	852	0.88	0.15	1.03
1949	713	124	837	0.85	0.15	1.00
1950	706	101	807	0.83	0.12	0.95
1951	778	123	901	0.91	0.14	1.05
1952	712	93	805	0.83	0.11	0.94
1953	864	94	958	1.00	0.11	1.10
1954	709	99	808	0.81	0.11	0.92
1955	620	76	696	0.70	0.09	0.78
1956	568	55	623	0.63	0.06	0.69
1957	527	53	580	0.57	0.06	0.63
1958	469	54	533	0.56	0.06	0.62
1959	417	38	455	0.44	0.04	0.48
1960	378	37	415	0.39	0.04	0.43
1961	341	42	383	0.34	0.04	0.39
1962	283	59	342	0.28	0.06	0.34
1963	276	45	321	0.27	0.04	0.31
1964	263	48	311	0.25	0.05	0.30
1965	230	43	273	0.21	0.04	0.25
*1966	117	16	133	0.17	0.02	0.20
1967	74	20	94	0.08	0.02	0.10
1968	67	9	76	0.09	0.01	0.10
1969	63	11	74	0.09	0.02	0.10
1970	63	10	73	0.09	0.01	0.10
1971	76	15	91	0.10	0.02	0.12
1972	48	11	59	0.06	0.01	0.08

\* reduced County came into operation.

The table below shows the death-rates from tuberculosis in the Urban and Rural Districts of the County from 1940:—

YEAR	DEATH RATE PER 1,000 OF THE POPULATION			
	Pulmonary Tuberculosis		Other forms of Tuberculosis	
	Urban	Rural	Urban	Rural
1940	0.51	0.29	0.11	0.06
1941	0.57	0.33	0.16	0.14
1942	0.52	0.34	0.13	0.10
1943	0.55	0.29	0.11	0.07
1944	0.52	0.25	0.10	0.07
1945	0.56	0.22	0.11	0.09
1946	0.49	0.28	0.08	0.06
1947	0.47	0.28	0.09	0.07
1948	0.51	0.33	0.07	0.05
1949	0.45	0.22	0.06	0.03
1950	0.39	0.20	0.06	0.06
1951	0.37	0.12	0.05	0.04
1952	0.27	0.07	0.04	0.04
1953	0.19	0.10	0.04	0.00
1954	0.18	0.13	0.04	0.03
1955	0.10	0.04	0.01	0.01
1956	0.13	0.07	0.01	0.00
1957	0.10	0.01	0.01	0.01
1958	0.09	0.05	0.01	0.01
1959	0.09	0.06	0.01	0.01
1960	0.07	0.04	0.01	0.01
1961	0.05	0.05	0.01	0.00
1962	0.06	0.03	0.00	0.01
1963	0.05	0.04	0.01	0.01
1964	0.03	0.01	0.00	0.01
1965	0.03	0.03	0.00	0.00
*1966	0.05	0.02	0.00	0.00
1967	0.01	0.00	0.00	0.00
1968	0.00	0.00	0.00	0.00
1969	0.04	0.01	0.01	0.01
1970	0.03	0.02	0.01	0.01
1971	0.02	0.02	0.01	0.00
1972	0.004	0.010	0.002	0.007

\* reduced County came into operation.

TABLE SHOWING CHIEF CAUSES OF DEATH

<i>Condition</i>	<i>Number of Deaths</i>
Heart Disease .. .. .	2,379
Cancer (all forms) .. .. .	1,375
Cerebrovascular Disease .. .. .	1,107
Pneumonia .. .. .	549
Bronchitis and Emphysema .. .. .	358
Other forms of Circulatory Disease .. .. .	337
Hypertensive Disease .. .. .	105
Accidents (General) .. .. .	103
Motor Vehicle Accidents .. .. .	89
Other diseases of Respiratory System .. .. .	78
Congenital Anomalies .. .. .	71
Other diseases of Digestive System .. .. .	69
TOTAL .. .. .	6,620
Total number of deaths from <i>all</i> causes .. .. .	7,274
The numbers of deaths listed above represent 91 per cent of the total deaths.	

BIRTHS

The number of births in the Administrative County amounted to 12,342, the number in the Urban Districts being 7,393 and in the Rural Districts 4,949.

LIVE BIRTH-RATE PER 1,000 OF POPULATION															
DISTRICTS	5 yrs. 1914- 1918	5 yrs. 1919- 1923	5 yrs. 1924- 1928	5 yrs. 1929- 1933	5 yrs. 1934- 1938	5 yrs. 1939- 1943	5 yrs. 1944- 1948	5 yrs. 1949- 1953	5 yrs. 1954- 1958	5 yrs. 1959- 1963	5 yrs. 1964- 1968	1969	1970	1971	1972
Staffordshire { Combined Urban and Rural .. Urban .. Rural ..	24.0	24.1	20.2	17.6	17.1	18.3	19.9	16.2	16.2	18.2	19.9	19.4	18.2	18.2	16.4
	25.0	25.0	20.7	18.1	17.5	18.9	20.4	16.4	16.3	18.2	19.7	19.2	17.9	18.2	16.5
	21.6	22.0	19.0	16.6	15.7	16.7	18.5	15.6	15.9	17.9	20.1	19.7	18.6	18.3	16.2
England and Wales ..	20.4	21.3	17.8	15.6	14.9	15.2	18.2	15.8	15.7	17.4	17.5	16.3	16.0	16.0	14.8

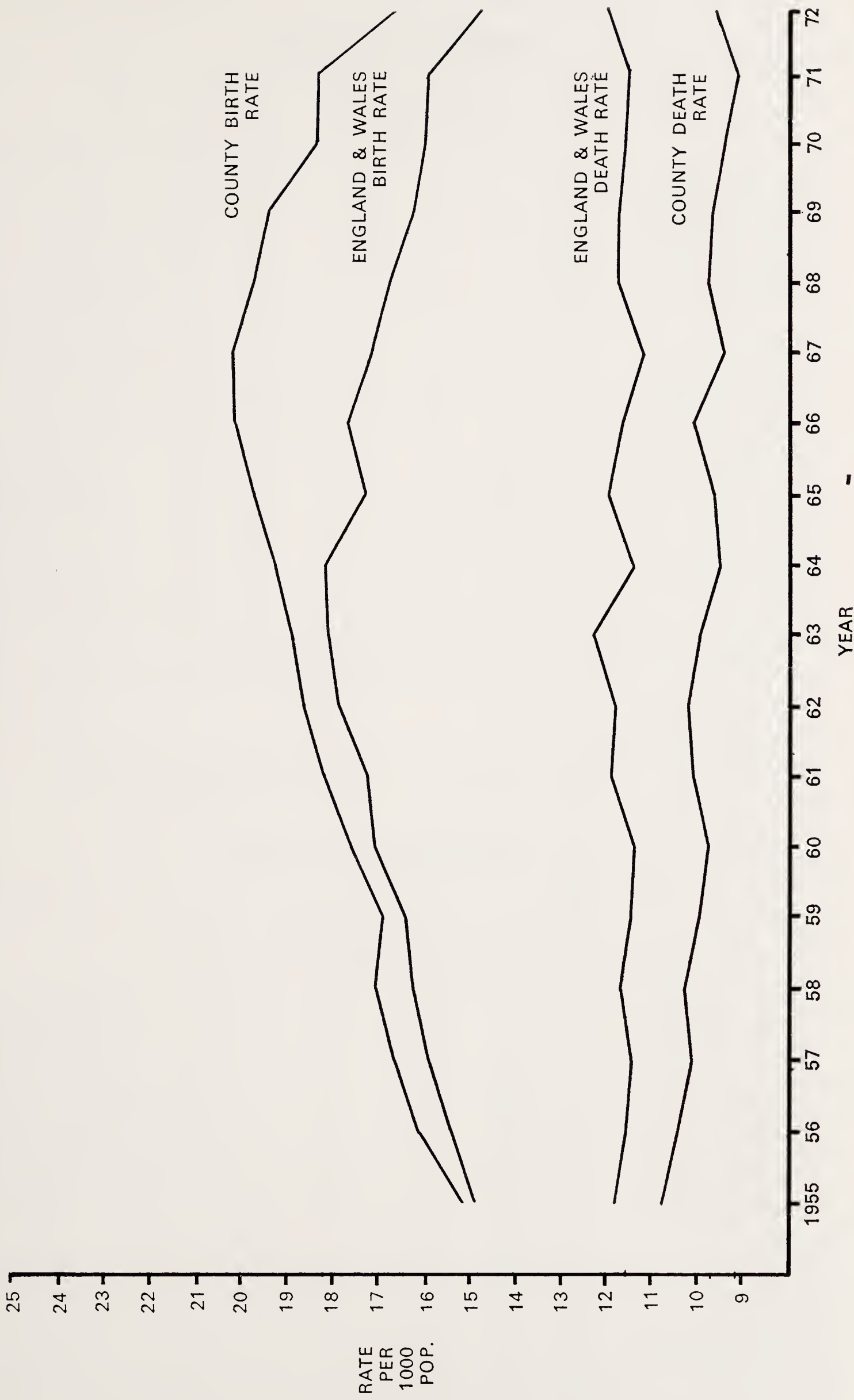
DEATHS

The number of deaths in the Administrative County amounted to 7,274, the number in the Urban Districts being 4,474 and in the Rural Districts 2,800.

DEATH-RATE PER 1,000 OF POPULATION															
DISTRICTS	5 yrs. 1914- 1918	5 yrs. 1919- 1923	5 yrs. 1924- 1928	5 yrs. 1929- 1933	5 yrs. 1934- 1938	5 yrs. 1939- 1943	5 yrs. 1944- 1948	5 yrs. 1949- 1953	5 yrs. 1954- 1958	5 yrs. 1959- 1963	5 yrs. 1964- 1968	1969	1970	1971	1972
Staffordshire { Combined Urban .. Urban .. Rural ..	15.0	12.3	11.4	11.6	11.3	11.2	10.4	10.5	10.5	10.0	9.7	9.8	9.6	9.2	9.7
	15.5	12.6	11.5	11.8	11.3	11.2	10.4	10.7	10.5	10.0	9.8	10.0	9.6	9.6	10.0
	13.8	11.6	11.2	11.2	11.2	11.0	10.4	10.0	10.3	9.9	9.6	9.5	9.6	8.7	9.2
England and Wales ..	15.2	12.5	12.0	12.3	11.9	12.6	11.5	11.7	11.6	11.8	11.6	11.9	11.7	11.6	12.1



COUNTY BIRTH & DEATH RATES COMPARED WITH ENGLAND & WALES  
SHOWING NATURAL INCREASE IN POPULATION



# CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE DURING 1972 IN THE ADMINISTRATIVE COUNTY OF STAFFORDSHIRE.

## Aggregate of Urban Districts.

CAUSE OF DEATH	Sex	All Ages	Under 4 weeks	4 weeks and under 1 year	AGE IN YEARS								
					1- 4	5- 14	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and over
B3 Bacillary Dysentery	M	-	-	-	-	-	-	-	-	-	-	-	-
Amoebiasis .. ..	F	1	1	-	-	-	-	-	-	-	-	-	-
B4 Enteritis and other	M	2	-	1	1	-	-	-	-	-	-	-	-
Diarrhoeal Diseases ..	F	1	-	1	-	-	-	-	-	-	-	-	-
B5 Tuberculosis of	M	2	-	-	-	-	-	-	-	-	1	1	-
Respiratory System ..	F	-	-	-	-	-	-	-	-	-	-	-	-
B6(1) Late effects of	M	-	-	-	-	-	-	-	-	-	-	-	-
Respiratory T.B. ..	F	1	-	-	-	-	-	-	1	-	-	-	-
B11 Meningococcal Infection	M	1	-	-	-	1	-	-	-	-	-	-	-
	F	-	-	-	-	-	-	-	-	-	-	-	-
B17 Syphilis and its	M	1	-	-	-	-	-	-	-	-	-	-	1
Sequelae .. ..	F	-	-	-	-	-	-	-	-	-	-	-	-
B18 Other Infective and	M	3	-	1	-	-	-	-	1	-	-	-	1
Parasitic Diseases ..	F	1	1	-	-	-	-	-	-	-	-	-	-
B19(1) Malignant Neoplasm,	M	8	-	-	-	-	-	-	-	-	3	5	-
Buccal Cavity Etc ..	F	4	-	-	-	-	-	-	1	1	2	-	-
B19(2) Malignant Neoplasm,	M	15	-	-	-	-	-	-	1	2	6	3	3
Oesophagus .. ..	F	14	-	-	-	-	-	-	-	2	3	4	5
B19(3) Malignant Neoplasm,	M	64	-	-	-	-	-	1	-	5	19	25	14
Stomach .. ..	F	33	-	-	-	-	-	-	-	2	3	10	18
B19(4) Malignant Neoplasm,	M	63	-	-	-	-	-	1	-	8	16	26	12
Intestine .. ..	F	75	-	-	-	-	-	-	1	7	12	22	33
B19(5) Malignant Neoplasm,	M	5	-	-	-	-	-	-	1	-	2	2	-
Larynx .. ..	F	-	-	-	-	-	-	-	-	-	-	-	-
B19(6) Malignant Neoplasm,	M	172	-	-	-	-	-	1	3	12	64	74	18
Lung, Bronchus.. ..	F	26	-	-	-	-	-	-	1	5	9	9	2
B19(7) Malignant Neoplasm,	M	2	-	-	-	-	-	-	1	-	-	1	-
Breast .. ..	F	62	-	-	-	-	-	2	6	8	12	17	17
B19(8) Malignant Neoplasm,													
Uterus .. ..	F	39	-	-	-	-	-	2	1	7	7	15	7
B19(9) Malignant Neoplasm,													
Prostate .. ..	M	21	-	-	-	-	-	-	-	-	1	5	15
B19(10) Leukaemia .. ..	M	14	-	-	-	-	-	1	2	1	2	4	4
	F	9	-	-	-	-	-	1	1	1	-	3	3
B19(11) Other Malignant	M	100	-	-	1	4	1	3	7	12	24	32	16
Neoplasms .. ..	F	115	-	1	2	-	2	-	4	12	21	38	35
B20 Benign and unspecified	M	3	-	-	1	-	-	-	-	-	1	1	-
Neoplasms .. ..	F	3	2	-	-	-	1	-	-	-	-	-	-
B21 Diabetes Mellitus ..	M	5	-	-	-	-	-	-	-	1	1	2	1
	F	24	-	-	-	-	1	-	-	2	-	6	15
B22 Avitaminoses, etc. ..	M	-	-	-	-	-	-	-	-	-	-	-	-
	F	1	-	-	-	-	-	1	-	-	-	-	-
B46(1) Other Endocrine etc.,	M	5	1	1	-	-	-	-	-	-	2	1	-
Diseases .. ..	F	9	-	1	-	-	-	-	1	1	-	2	4
B23 Anaemias .. ..	M	8	-	-	-	-	-	-	-	-	2	-	6
	F	8	-	-	-	-	-	-	-	-	1	1	6
B46(3) Mental Disorders ..	M	1	-	-	-	-	-	-	-	1	-	-	-
	F	1	-	-	-	-	-	1	-	-	-	-	-
B24 Meningitis .. ..	M	4	1	1	-	-	-	-	-	1	1	-	-
	F	1	-	1	-	-	-	-	-	-	-	-	-
B46(4) Multiple Sclerosis ..	M	1	-	-	-	-	-	-	-	1	-	-	-
	F	2	-	-	-	-	-	-	1	1	-	-	-
B46(5) Other Diseases of	M	11	-	1	1	-	1	1	-	2	2	3	-
Nervous System .. ..	F	18	-	-	1	2	1	-	1	1	1	3	8
B26 Chronic Rheumatic	M	17	-	-	-	-	-	-	2	2	4	4	5
Heart Disease .. ..	F	35	-	-	-	-	-	-	4	8	5	8	10
B27 Hypertensive Disease ..	M	27	-	-	-	-	-	-	-	2	6	9	10
	F	36	-	-	-	-	-	1	-	1	1	12	21
B28 Ischaemic Heart	M	721	-	-	-	-	-	1	19	82	183	252	184
Disease .. ..	F	486	-	-	-	-	-	-	2	18	52	158	276
B29 Other Forms of Heart	M	98	-	-	-	-	3	1	2	4	12	29	47
Disease .. ..	F	111	-	-	-	-	-	1	-	2	6	20	82
B30 Cerebrovascular	M	290	-	-	-	-	-	1	6	10	40	98	135
Disease .. ..	F	414	-	-	-	-	1	1	2	17	32	99	262
B46(6) Other Diseases of	M	100	-	-	-	-	-	1	1	5	8	20	65
Circulatory System ..	F	111	-	-	-	-	-	-	1	1	6	15	88
B31 Influenza .. ..	M	8	-	-	-	-	-	-	-	1	-	2	5
	F	15	-	-	-	-	-	-	-	-	2	2	11
B32 Pneumonia .. ..	M	156	-	6	-	-	2	-	2	5	10	43	88
	F	166	3	1	1	-	-	1	-	3	16	41	100
B33(1) Bronchitis and	M	180	-	2	-	-	-	-	-	5	40	81	52
Emphysema .. ..	F	43	-	1	-	-	-	-	1	4	4	13	20
B33(2) Asthma .. ..	M	2	-	-	-	-	-	-	-	2	-	-	-
	F	4	-	-	-	-	-	-	-	1	1	2	-
B46(7) Other Diseases of	M	32	-	2	-	-	1	-	-	-	5	11	13
Respiratory System ..	F	13	-	-	-	1	-	-	-	2	3	1	6
B34 Peptic Ulcer .. ..	M	12	-	-	-	-	-	-	-	3	2	2	5
	F	13	-	-	-	-	-	1	-	1	-	1	10
B35 Appendicitis .. ..	M	2	-	-	-	1	-	-	-	-	1	-	-
	F	3	-	-	-	-	1	-	-	-	-	2	-

### Aggregate of Urban Districts continued.

CAUSE OF DEATH	Sex	All Ages	Under 4 weeks	4 weeks and under 1 year	AGE IN YEARS								
					1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75 and over
B36 Intestinal Obstruction and Hernia ..	M	10	1	—	—	—	—	—	1	—	1	3	4
	F	7	2	—	—	—	—	—	—	1	—	—	4
B37 Cirrhosis of Liver ..	M	5	—	—	—	—	—	—	—	—	3	2	—
	F	8	—	—	—	—	1	—	—	1	1	1	4
B46(8) Other Diseases of Digestive System ..	M	12	—	—	—	—	—	—	—	1	3	4	4
	F	28	—	—	—	—	—	1	1	—	2	11	13
B38 Nephritis and Nephrosis	M	12	—	—	—	—	—	1	—	3	4	3	1
	F	10	—	—	—	—	2	—	—	1	1	2	4
B39 Hyperplasia of Prostate.	M	7	—	—	—	—	—	—	—	—	—	2	5
B46(9) Other Diseases, Genito-Urinary System .	M	10	—	—	—	—	1	—	—	—	—	2	7
	F	16	1	—	—	—	—	—	—	1	1	3	10
B41 Other Complications of Pregnancy, etc. ..	F	2	—	—	—	—	1	—	1	—	—	—	—
B46(10) Diseases of Skin, Subcutaneous Tissue ..	M	2	—	—	—	—	—	—	1	—	—	1	—
	F	1	—	—	—	—	—	—	—	—	—	—	1
B46(11) Diseases of Musculo-Skeletal System ..	M	1	—	—	—	—	—	—	—	—	1	—	—
	F	6	—	—	—	—	—	—	—	—	1	1	4
B42 Congenital Anomalies..	M	28	8	2	4	4	2	2	2	1	1	2	—
	F	20	11	4	3	—	—	—	—	—	—	—	2
B43 Birth Injury, Difficult Labour, etc. ..	M	24	24	—	—	—	—	—	—	—	—	—	—
	F	15	15	—	—	—	—	—	—	—	—	—	—
B44 Other Causes of Perinatal Mortality ..	M	14	14	—	—	—	—	—	—	—	—	—	—
	F	9	9	—	—	—	—	—	—	—	—	—	—
B45 Symptoms and Ill Defined Conditions ..	M	9	1	1	—	—	—	—	—	—	—	2	5
	F	11	—	—	—	—	—	—	—	—	—	1	10
BE47 Motor Vehicle Accidents ..	M	50	—	—	1	3	13	12	5	1	4	6	5
	F	12	—	—	—	2	2	—	1	2	3	—	2
BE48 All other Accidents ..	M	30	1	—	—	3	4	2	5	4	5	1	5
	F	34	—	2	1	2	—	1	2	—	2	8	16
BE49 Suicide and Self-Inflicted Injuries ..	M	12	—	—	—	—	2	1	2	4	2	—	1
	F	6	—	—	—	—	1	1	—	1	3	—	—
BE50 All Other External Causes ..	M	3	—	—	—	—	1	—	1	—	—	1	—
	F	6	—	—	—	—	—	—	—	3	1	1	1
TOTAL - ALL CAUSES ..	M	2,385	51	18	9	16	31	30	65	181	482	765	737
	F	2,089	45	12	8	7	14	15	33	119	214	512	1,110

### CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE DURING 1972 IN THE ADMINISTRATIVE COUNTY OF STAFFORDSHIRE.

#### Aggregate of Rural Districts.

CAUSE OF DEATH	Sex	All Ages	Under 4 weeks	4 weeks and under 1 year	AGE IN YEARS								
					1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75 and over
B4 Enteritis and Other Diarrhoeal Diseases ..	M	4	—	2	1	—	—	—	1	—	—	—	—
	F	2	—	—	—	—	—	—	—	—	—	—	2
B5 Tuberculosis of Respiratory System ..	M	3	—	—	—	—	—	—	—	—	—	2	1
	F	—	—	—	—	—	—	—	—	—	—	—	—
B6(1) Late Effects of Respiratory T.B. ..	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	1	—	—	—	—	—	—	—	—	—	—	1
B6(2) Other Tuberculosis	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	1	—	—	—	—	—	—	—	—	1	—	—
B18 Other Infective and Parasitic Diseases ..	M	1	—	—	—	—	1	—	—	—	—	—	—
	F	4	1	1	—	—	—	1	1	—	—	—	—
B19(1) Malignant Neoplasm, Buccal Cavity, etc. ..	M	8	—	—	—	—	—	—	—	2	4	—	2
	F	1	—	—	—	—	—	—	—	1	—	—	—
B19(2) Malignant Neoplasm, Oesophagus ..	M	8	—	—	—	—	—	—	—	1	2	4	1
	F	3	—	—	—	—	—	—	—	—	—	3	—
B19(3) Malignant Neoplasm, Stomach ..	M	24	—	—	—	—	—	—	—	1	5	8	10
	F	25	—	—	—	—	—	—	—	2	1	7	15
B19(4) Malignant Neoplasm, Intestine ..	M	32	—	—	—	—	—	—	—	4	10	11	7
	F	49	—	—	—	—	—	—	1	5	9	14	20
B19(5) Malignant Neoplasm, Larynx ..	M	2	—	—	—	—	—	—	—	—	—	1	1
	F	1	—	—	—	—	—	—	—	—	—	—	1
B19(6) Malignant Neoplasm, Lung, Bronchus..	M	101	—	—	—	—	—	—	—	18	31	42	10
	F	21	—	—	—	—	—	—	1	3	9	4	4
B19(7) Malignant Neoplasm, Breast ..	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	56	—	—	—	—	—	—	5	9	19	15	8
B19(8) Malignant Neoplasm, Uterus ..	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	20	—	—	—	—	—	—	1	1	5	5	8



# Aggregate of Rural District continued

CAUSE OF DEATH	Sex	All Ages	Under 4 weeks	4 weeks and under 1 year	AGE IN YEARS									75- and over
					1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74		
B19(9) Malignant Neoplasm, Prostate .. .. .	M	24	—	—	—	—	—	—	—	—	6	7	11	
B19(10) Leukaemia .. .. .	M	8	—	—	—	1	—	—	—	2	2	1	2	
	F	8	—	—	—	1	—	—	—	—	1	3	3	
B19(11) Other Malignant Neoplasms .. .. .	M	66	—	—	1	—	1	3	3	11	19	14	14	
	F	67	—	—	—	—	—	2	3	7	18	26	11	
B20 Benign and Unspecified Neoplasms .. .. .	M	1	—	—	—	—	—	—	—	—	1	—	—	
	F	3	—	—	—	—	—	1	—	—	1	—	1	
B21 Diabetes Mellitus .. .. .	M	8	—	—	—	—	—	—	—	1	3	2	2	
	F	25	—	—	—	1	—	1	—	—	2	11	10	
B46(1) Other Endocrine etc., Diseases .. .. .	M	4	—	—	1	—	—	—	—	—	2	1	—	
	F	3	—	—	—	—	—	—	—	—	1	2	—	
B23 Anaemias .. .. .	M	—	—	—	—	—	—	—	—	—	—	—	—	
	F	5	—	—	—	—	—	—	—	—	—	2	3	
B46(3) Mental Disorders .. .. .	M	1	—	—	—	—	—	—	—	—	—	—	1	
	F	2	—	—	—	—	—	—	—	—	—	—	2	
B24 Meningitis .. .. .	M	1	1	—	—	—	—	—	—	—	—	—	—	
	F	1	—	—	—	—	—	—	—	—	—	1	—	
B46(4) Multiple Sclerosis .. .. .	M	5	—	—	—	—	—	1	2	—	—	2	—	
	F	—	—	—	—	—	—	—	—	—	—	—	—	
B46(5) Other Diseases of Nervous System .. .. .	M	9	—	—	—	—	1	—	—	1	—	2	5	
	F	11	—	—	—	—	1	—	1	2	1	2	4	
B25 Active Rheumatic Fever .. .. .	M	—	—	—	—	—	—	—	—	—	—	—	—	
	F	1	—	—	—	—	—	—	—	—	1	—	—	
B26 Chronic Rheumatic Heart Disease .. .. .	M	17	—	—	—	—	—	—	—	2	2	5	8	
	F	24	—	—	—	—	—	1	2	1	4	6	10	
B27 Hypertensive Disease .. .. .	M	23	—	—	—	—	—	—	1	3	3	8	8	
	F	19	—	—	—	—	—	—	—	1	1	9	8	
B28 Ischaemic Heart Disease .. .. .	M	438	—	—	—	—	—	1	8	49	100	153	127	
	F	270	—	—	—	—	—	1	2	5	29	75	158	
B29 Other Forms of Heart Disease .. .. .	M	67	—	1	—	—	2	—	1	3	5	17	38	
	F	95	—	—	—	—	—	—	1	2	8	16	68	
B30 Cerebrovascular Disease .. .. .	M	177	—	—	—	—	—	2	4	8	23	55	86	
	F	225	—	—	—	—	2	—	—	6	17	42	158	
B46(6) Other Diseases of Circulatory System .. .. .	M	64	—	—	—	—	—	—	2	4	6	20	35	
	F	62	—	—	—	—	—	—	2	2	3	12	48	
B31 Influenza .. .. .	M	1	—	—	—	—	—	—	—	—	1	—	2	
	F	3	—	—	—	—	—	—	—	—	—	1	3	
B32 Pneumonia .. .. .	M	108	—	—	—	—	1	1	1	5	14	19	6—	
	F	119	3	—	1	—	—	—	1	2	5	19	82	
B33(1) Bronchitis and Emphysema .. .. .	M	95	—	—	—	—	—	—	—	5	18	36	37	
	F	40	—	—	—	—	—	—	—	1	3	15	21	
B33(2) Asthma .. .. .	M	4	—	—	—	—	—	1	—	—	2	—	1	
	F	2	—	—	—	—	—	—	—	—	—	2	—	
B46(7) Other Diseases of Respiratory System .. .. .	M	18	—	1	—	—	—	—	1	2	2	5	7	
	F	15	—	1	—	—	—	—	—	—	3	4	7	
B34 Peptic Ulcer .. .. .	M	13	—	—	—	—	—	—	2	1	—	3	7	
	F	4	—	—	—	—	—	—	—	—	1	—	3	
B35 Appendicitis .. .. .	M	3	—	—	1	—	—	—	—	—	1	—	1	
	F	1	—	—	—	—	—	1	—	—	—	—	—	
B36 Intestinal Obstruction and Hernia .. .. .	M	5	—	—	—	1	—	—	—	—	—	2	2	
	F	3	1	—	—	—	—	—	—	—	—	—	2	
B37 Cirrhosis of Liver .. .. .	M	3	—	—	—	—	—	—	—	2	1	—	—	
	F	6	—	—	—	—	—	—	—	—	2	4	—	
B46(8) Other Diseases of Digestive System .. .. .	M	14	—	—	—	—	—	—	—	—	3	7	4	
	F	15	—	—	—	—	—	—	—	1	3	3	8	
B38 Nephritis and Nephrosis .. .. .	M	6	—	—	—	—	—	—	1	1	1	2	1	
	F	6	—	—	—	—	1	—	1	—	2	—	2	
B39 Hyperplasia of Prostate .. .. .	M	5	—	—	—	—	—	—	—	—	—	—	5	
B46(9) Other Diseases, Genito-Urinary System .. .. .	M	6	—	—	—	—	—	—	1	—	1	2	2	
	F	10	—	—	—	—	—	—	1	—	4	3	2	
B46(10) Diseases of Skin, Subcutaneous Tissue .. .. .	M	1	—	—	—	—	—	—	—	—	—	1	—	
	F	5	—	—	—	—	—	—	—	—	3	—	2	
B46(11) Diseases of Musculo-Skeletal System .. .. .	M	5	—	—	—	—	—	—	1	—	3	1	—	
	F	6	—	—	—	—	—	—	—	—	1	2	3	
B42 Congenital Anomalies .. .. .	M	9	4	2	1	1	—	—	1	—	—	—	—	
	F	14	4	4	2	—	—	—	—	1	3	—	—	
B43 Birth Injury, Difficult Labour, etc. .. .. .	M	16	16	—	—	—	—	—	—	—	—	—	—	
	F	6	6	—	—	—	—	—	—	—	—	—	—	
B44 Other Causes of Perinatal Mortality .. .. .	M	11	11	—	—	—	—	—	—	—	—	—	—	
	F	6	6	—	—	—	—	—	—	—	—	—	—	
B45 Symptoms and Ill Defined Conditions .. .. .	M	7	—	—	—	—	—	—	—	—	—	1	6	
	F	8	—	1	—	—	—	—	—	—	—	—	7	
BE47 Motor Vehicle Accidents .. .. .	M	16	—	—	—	1	6	3	1	2	—	2	1	
	F	11	—	1	—	3	2	2	—	—	—	1	2	
BE48 All Other Accidents .. .. .	M	22	—	2	1	2	2	1	3	2	1	4	4	
	F	17	1	1	1	1	—	—	1	3	—	2	6	
BE49 Suicide and Self-Inflicted Injuries .. .. .	M	18	—	—	—	—	2	2	5	3	4	2	—	
	F	12	—	—	—	—	—	4	1	2	4	1	—	
BE50 All Other External Causes .. .. .	M	3	—	—	—	—	—	—	1	—	1	1	—	
	F	1	—	—	—	—	—	—	—	1	—	—	—	
TOTAL — ALL CAUSES .. .. .	M	1,485	32	8	6	6	16	15	40	133	277	443	509	
	F	1,315	22	9	4	6	7	14	25	58	165	312	603	



Table showing Population, Number of Persons per acre, Birth and Death-rates as well as the Death-rates at all ages and among Children under 1 year, and Death rates from certain causes.

URBAN

DISTRICT	Population at all ages		Number of persons per acre	Crude Live Birth-rate per 1,000 of Population	Adjusted Live Birth-rate by comparability factor	Still-births, Rate per 1,000 total births	Crude death-rate per 1,000 of Population	Adjusted death-rate by comparability factor	Infant Mortality Rate (Deaths under 1 year per 1,000 live births)	Neonatal Mortality Rate (Deaths under 4 weeks per 1,000 live births)	Early Neonatal Mortality Rate (Deaths under 1 week per 1,000 total live births)	Perinatal Mortality Rate (Still-births and deaths under 1 week combined per 1,000 total births)	Death Rate per 1,000 Population						
	Census 1971	Estimated 1972											Ischaemic Heart Disease	Malignant Neoplasm	Bronchitis and Emphysema	Pneumonia	Other Diseases of Respiratory System	Nephritis and Nephrosis	Congenital Anomalies
Aldridge-Brownhills	88,598	88,810	6.7	15.1	13.7	18.0	7.1	11.8	16	12	10	28	1.96	1.57	0.41	0.43	0.05	0.01	0.10
Biddulph	17,386	17,980	2.7	18.4	16.6	12.0	7.8	10.6	15	12	6	18	1.84	1.17	0.56	0.33	0.28	0.06	0.11
Cannock	55,882	56,230	5.1	16.6	15.4	13.0	10.7	12.8	18	12	11	23	2.72	1.76	0.73	1.00	0.11	0.04	0.11
Kidsgrove	22,194	22,290	5.4	17.3	15.6	—	9.1	14.1	13	13	10	10	2.56	1.88	0.27	0.54	0.18	0.09	0.13
Leek	19,452	19,340	4.5	15.1	16.6	3.0	15.3	12.1	17	10	10	14	3.93	2.69	0.26	1.14	0.10	0.10	0.05
Lichfield	22,660	23,180	6.4	15.8	14.1	16.0	9.3	10.7	19	16	16	32	2.72	1.34	0.39	0.82	0.17	0.04	0.09
Newcastle	77,126	76,900	8.7	13.4	14.1	11.0	12.6	14.5	23	18	15	26	3.51	2.59	0.55	0.66	0.12	0.09	0.12
Rugeley	22,230	23,570	8.2	24.8	18.8	8.0	5.7	10.5	14	12	10	19	1.65	0.93	0.38	0.38	0.04	—	0.08
Stafford	55,001	54,530	10.7	15.5	15.3	11.0	11.7	12.2	18	12	11	21	3.45	2.04	0.53	1.06	0.11	0.07	0.11
Stone	11,003	10,970	5.6	15.6	15.0	—	11.9	9.5	18	18	12	12	3.28	1.64	0.64	0.36	—	—	0.18
Tamworth	40,285	43,830	5.7	22.6	19.0	13.0	9.2	11.7	14	10	8	21	2.19	1.35	0.50	0.91	0.07	0.02	0.11
Uttoxeter	9,039	9,080	2.7	13.1	13.9	17.0	12.2	12.2	17	17	17	33	2.42	2.75	0.77	0.77	0.11	0.11	0.11
Totals and Averages	440,856	446,710	6.1	16.5	15.5	12.0	10.0	12.4	17	13	11	23	2.70	1.83	0.50	0.72	0.10	0.05	0.11

RURAL

DISTRICT	Population at all ages		Mean area per person in acres	Crude Live Birth-rate per 1,000 of Population	Adjusted Live Birth-rate by comparability factor	Still-births, Rate per 1,000 total births	Crude death-rate per 1,000 of Population	Adjusted death-rate by comparability factor	Infant Mortality Rate (Deaths under 1 year per 1,000 live births)	Neonatal Mortality Rate (Deaths under 4 weeks per 1,000 live births)	Early Neonatal Mortality Rate (Deaths under 1 week per 1,000 total live births)	Perinatal Mortality Rate (Still-births and deaths under 1 week combined per 1,000 total births)	Death Rate per 1,000 Populatoin						
	Census 1971	Estimated 1972											Ischaemic Heart Disease	Malignant Neoplasm	Bronchitis and Emphysema	Pneumonia	Other Diseases of Respiratory System	Nephritis and Nephrosis	Congenital Anomalies
Cannock	43,855	45,180	1.3	20.1	15.7	14.0	8.0	12.7	18	14	12	26	2.08	1.62	0.42	0.58	0.15	0.02	0.07
Cheadle	40,098	40,970	1.5	15.8	14.5	14.0	11.0	10.1	11	6	6	20	2.42	1.66	0.49	1.22	0.12	0.12	0.05
Leek	13,247	13,120	5.5	12.3	13.9	12.0	9.2	10.9	12	12	12	25	2.51	1.68	0.15	0.38	0.08	0.08	0.15
Lichfield	58,878	61,030	1.4	20.9	16.5	11.0	8.8	10.4	14	9	9	19	2.00	1.33	0.51	1.02	0.08	0.02	0.05
Newcastle	20,670	22,080	1.8	11.1	9.2	8.0	10.6	12.1	25	20	16	24	2.90	1.72	0.45	0.63	0.23	0.05	0.18
Seisdon	38,939	39,230	1.1	13.4	13.8	13.0	9.3	10.8	17	15	13	26	2.29	2.17	0.51	0.54	—	0.03	0.08
Stafford	23,000	24,660	3.3	16.3	14.8	15.0	7.5	9.9	5	5	5	20	2.03	1.50	0.28	0.57	0.16	—	0.04
Stone	22,150	21,700	2.8	12.1	12.2	8.0	10.6	12.9	15	11	11	19	3.09	1.89	0.37	0.74	0.18	—	0.05
Tutbury	24,467	25,030	1.3	15.5	13.8	25.0	8.3	10.0	5	5	5	30	2.44	1.56	0.56	0.60	0.04	0.08	0.04
Uttoxeter	10,716	11,930	4.7	11.3	12.4	22.0	9.2	11.1	37	22	22	43	2.35	2.01	0.34	0.34	0.08	—	0.25
Totals and Averages	296,020	304,930	1.9	16.2	14.4	14.0	9.2	11.0	14	11	10	23	2.32	1.67	0.44	0.74	0.11	0.04	0.08

Deaths occurring during the year 1972 classified according to Diseases and Localities,  
together with Births occurring during the year.

URBAN

DISTRICT	Live Births	Still Births	Deaths from all causes	Deaths of Infants			Bacillary Dysentery, Amoebiasis	Enteritis and other Diarrhoeal Diseases	Tuberculosis of Respiratory System	Late Effects of Respiratory T.B.	Meningococcal Infection	Syphilis and its Sequelae	Other Infective and Parasitic Diseases	Malignant Neoplasm								
				Under one year of age	Under four weeks of age	Under one week of age								Buccal Cavity, etc.	Oesophagus	Stomach	Intestine	Larynx	Lung Bronchus	Breast	Uterus	Prostate
Aldridge-Brownhills	1,340	25	631	21	16	13	—	—	1	—	—	—	1	4	6	8	36	1	28	6	4	2
Biddulph ..	331	4	141	5	4	2	—	1	—	—	—	—	—	—	1	3	5	—	3	3	1	1
Cannock ..	935	12	604	17	11	10	1	1	—	—	—	—	—	1	3	14	12	1	25	12	4	2
Kidsgrove ..	386	—	203	5	5	4	—	—	—	—	—	—	—	—	1	6	5	1	12	4	4	1
Leek ..	293	1	295	5	3	3	—	—	—	—	—	—	—	3	3	9	8	1	13	2	6	3
Lichfield ..	367	6	215	7	6	6	—	—	—	1	—	1	1	—	1	5	5	—	5	1	2	1
Newcastle ..	1,032	12	967	24	19	15	—	—	1	—	—	—	1	1	4	26	26	1	54	17	8	4
Rugeley ..	585	5	135	8	7	6	—	1	—	—	—	—	—	—	2	3	2	—	7	1	1	—
Stafford ..	844	9	638	15	10	9	—	—	—	—	—	—	—	3	7	8	17	—	31	12	1	1
Stone ..	171	—	131	3	3	2	—	—	—	—	1	—	—	—	—	4	3	—	3	1	2	2
Tamworth ..	990	13	403	14	10	8	—	—	—	—	—	—	1	—	1	9	11	—	14	3	4	3
Uttoxeter ..	119	2	111	2	2	2	—	—	—	—	—	—	—	—	—	2	8	—	3	2	2	1
TOTALS ..	7,393	89	4,474	126	96	80	1	3	2	1	1	1	4	12	29	97	138	5	198	64	39	21



Deaths occurring during the year 1972 classified according to Disease and Localities together with Births occurring during the year.

URBAN

DISTRICT		Leukaemia	Other Malignant Neoplasms	Benign and Unspecified Neoplasms	Diabetes Mellitus	Avitaminoses, Etc.	Other Endocrine etc. Diseases	Anaemias	Mental Disorders	Meningitis	Multiple Sclerosis	Other Diseases of Nervous System	Chronic Rheumatic Heart Disease	Hypertensive Disease	Ischaemic Heart Disease	Other forms of Heart Disease	Cerebrovascular Disease	Other Diseases of Circulatory System	Influenza	Pneumonia	Bronchitis and Emphysema	Asthma
	Aldridge-Brownhills ..	2	44	2	4	—	3	1	1	1	—	7	9	5	174	24	87	19	2	38	36	—
	Biddulph ..	2	4	—	1	—	1	—	—	—	—	1	3	3	33	7	26	7	—	6	10	—
	Cannock ..	2	25	2	2	—	1	5	—	—	1	5	12	9	153	31	85	32	2	56	41	1
	Kidsgrove ..	—	8	—	1	—	2	—	—	—	—	1	2	1	57	7	25	17	1	12	6	1
	Leek ..	1	4	—	1	1	1	2	—	1	—	1	2	6	76	25	63	5	1	22	5	2
	Lichfield ..	3	11	—	2	—	—	—	—	1	2	2	3	1	63	8	29	12	—	19	9	—
	Newcastle ..	4	58	1	8	—	2	3	—	1	—	8	6	11	270	35	164	41	7	51	42	2
	Rugeley ..	—	6	—	2	—	1	1	—	—	—	—	—	1	39	7	22	4	—	9	9	—
	Stafford ..	7	31	1	3	—	2	4	1	—	—	3	10	16	188	34	93	17	5	58	29	—
	Stone ..	1	3	—	1	—	—	—	—	—	—	—	2	3	36	7	21	11	—	4	7	—
	Tamworth ..	—	14	—	2	—	—	—	—	1	—	—	3	5	96	21	62	43	5	40	22	—
	Uttoxeter ..	1	7	—	2	—	1	—	—	—	—	1	—	2	22	3	27	3	—	7	7	—
TOTALS	..	23	215	6	29	1	14	16	2	5	3	29	52	63	1,207	209	704	211	23	322	223	6



Deaths occurring during the year 1972 classified according to Disease and Localities together with Births occurring during the year.

URBAN

DISTRICT		Other Diseases of Respiratory System	Peptic Ulcer	Appendicitis	Intestinal Obstruction and Hernia	Cirrhosis of Liver	Other Diseases of Digestive System	Nephritis and Nephrosis	Hyperplasia of Prostate	Other Diseases, Genito-Urinary System	Other Complications of Pregnancy, etc.	Diseases of Skin, Subcutaneous Tissue	Diseases of Musculo-Skeletal System	Congenital Anomalies	Birth Injury, Difficult Labour, etc.	Other Causes of Perinatal Mortality	Symptoms and Ill-defined Conditions	Motor Vehicle Accidents	All other Accidents	Suicide and Self-inflicted Injuries	All other External Causes
Aldridge-Brownhills	..	4	1	-	4	4	4	1	1	5	1	1	3	9	8	4	4	9	10	4	1
Biddulph	..	5	-	-	1	-	2	1	-	1	-	-	-	2	2	-	1	2	2	-	-
Cannock	..	6	1	-	1	-	6	2	-	7	-	2	1	6	3	3	2	10	6	3	4
Kidsgrove	..	4	1	1	1	1	2	2	1	-	-	-	-	3	-	3	-	2	6	1	-
Leek	..	2	2	-	1	-	4	2	1	-	-	-	1	1	1	2	5	3	2	1	-
Lichfield	..	4	2	-	-	1	1	1	-	3	-	-	-	2	4	2	1	4	2	-	-
Newcastle	..	9	8	4	4	2	14	7	2	1	-	-	1	9	9	2	2	11	18	5	2
Rugeley	..	1	1	-	2	-	-	-	-	2	1	-	-	2	2	2	-	3	1	-	-
Stafford	..	6	7	-	1	2	5	4	-	3	-	-	-	6	6	2	2	4	5	3	-
Stone	..	-	1	-	1	2	2	-	1	2	-	-	-	2	2	-	-	3	2	-	1
Tamworth	..	3	1	-	1	1	-	1	1	2	-	-	-	5	1	3	5	9	9	1	-
Uttoxeter	..	1	-	-	-	-	-	1	-	-	-	-	1	1	1	-	1	2	1	-	1
TOTALS	..	45	25	5	17	13	40	22	7	26	2	3	7	48	39	23	20	62	64	18	9

RURAL

DISTRICT	Live Births	Still Births	Deaths from all causes	Deaths of Infants			Enteritis and other Diarrhoeal Diseases	Tuberculosis of Respiratory System	Late effects of Respiratory T.B.	Other Tuberculosis	Other Infective and Parasitic Diseases	Malignant Neoplasm								
				Under one year of age	Under four weeks of age	Under one week of age						Buccal Cavity, etc.	Oesophagus	Stomach	Intestine	Larynx	Lung, Bronchus	Breast	Uterus	Prostate
Cannock ..	907	13	363	16	13	11	—	—	—	1	2	1	1	9	13	—	21	8	2	4
Cheadle ..	648	9	449	7	4	4	—	—	1	1	—	1	4	7	11	1	14	1	1	3
Leek ..	161	2	121	2	2	2	—	1	1	—	—	—	—	—	3	—	8	4	—	—
Lichfield ..	1,277	14	538	18	12	11	4	1	—	—	1	1	2	7	14	—	14	10	6	1
Newcastle ..	244	2	234	6	5	4	1	1	—	—	2	1	—	4	8	—	9	3	2	2
Seisdon ..	524	7	364	9	8	7	—	—	—	—	—	1	1	10	13	1	21	11	2	6
Stafford ..	403	6	184	2	2	2	—	—	—	—	—	1	1	2	6	—	10	7	—	4
Stone ..	263	2	230	4	3	3	—	—	—	—	—	1	1	6	4	—	8	5	2	3
Tutbury ..	387	10	207	2	2	2	—	—	—	—	—	—	—	4	6	—	12	5	2	1
Uttoxeter ..	135	3	110	5	3	3	—	—	—	—	—	2	1	—	3	1	5	2	3	—
TOTALS ..	4,949	68	2,800	71	54	49	6	3	1	1	5	9	11	49	81	3	122	56	20	24

# RURAL

DISTRICT	Leukaemia	Other Malignant Neoplasms	Benign and Unspecified Neoplasms	Diabetes Mellitus	Other Endocrine etc. Diseases	Anaemias	Mental Disorders	Meningitis	Multiple Sclerosis	Other Diseases of Nervous System	Active Rheumatic Fever	Chronic Rheumatic Heart Disease	Hypertensive Disease	Ischaemic Heart Disease	Other forms of Heart Disease	Cerebrovascular Disease	Other Diseases of Circulatory System	Influenza	Pneumonia	Bronchitis and Emphysema
Cannock .. ..	6	14	-	3	-	-	-	-	-	1	-	5	6	94	20	48	11	1	26	19
Cheadle .. ..	3	25	-	7	1	3	2	-	1	7	-	6	4	99	46	59	14	1	50	20
Leek .. ..	-	7	1	1	-	-	-	-	-	-	1	2	3	33	5	24	7	-	5	2
Lichfield .. ..	3	26	1	6	3	1	-	-	1	2	-	5	6	122	18	93	26	-	62	31
Newcastle .. ..	1	9	-	5	-	-	-	1	1	3	-	1	4	64	10	37	18	1	14	10
Seisdon .. ..	2	19	-	4	1	1	1	-	2	2	-	7	7	90	17	51	9	1	21	20
Stafford .. ..	-	6	-	2	2	-	-	-	-	1	-	5	3	50	12	23	9	-	14	7
Stone .. ..	1	11	1	1	-	-	-	-	-	1	-	7	1	67	15	29	16	-	16	8
Tutbury .. ..	-	9	1	3	-	-	-	1	-	1	-	3	5	61	11	23	10	-	15	14
Uttoxeter .. ..	-	7	-	1	-	-	-	-	-	2	-	-	3	28	8	16	6	-	4	4
TOTALS .. ..	16	133	4	33	7	5	3	2	5	20	1	41	42	708	162	403	126	4	227	135

RURAL

DISTRICT	Asthma	Other Diseases of Respiratory System	Peptic Uleer	Appendicitis	Intestinal Obstruction and Hernia	Cirrhosis of Liver	Other Diseases of Digestive System	Nephritis and Nephrosis	Hyperplasia of Prostate	Other Diseases, Genito-Urinary System	Diseases of Skin, Subcutaneous Tissue	Diseases of Musculo-Skeletal System	Congenital Anomalies	Birth Injury, Difficult Labour, etc.	Other causes of Perinatal Mortality	Symptoms and Ill-defined Conditions	Motor Vehicle Accidents	All other Accidents	Suicide and Self-inflicted Injuries	All other External Causes
Cannock ..	1	7	2	-	-	2	1	1	1	5	-	2	3	6	4	5	4	3	1	-
Cheadle ..	2	5	2	-	1	1	3	5	1	2	-	1	2	2	2	4	12	8	1	
Leek ..	1	1	1	-	-	1	2	1	-	1	-	-	2	1	-	-	2	2	-	
Lichfield ..	-	5	4	-	2	2	8	1	2	3	4	2	3	5	5	7	10	5	1	
Newcastle ..	-	5	-	1	-	1	1	1	-	-	-	-	4	2	1	-	3	2	-	
Seisdon ..	-	-	3	1	3	1	6	1	1	1	-	3	3	5	2	3	2	6	-	
Stafford ..	-	4	1	-	-	1	2	-	-	1	-	-	1	-	1	3	3	3	1	1
Stone ..	2	4	1	1	2	-	2	-	-	3	1	1	1	1	-	1	2	2	3	1
Tutbury ..	-	1	3	1	-	-	2	2	-	-	1	2	1	-	-	1	1	-	3	-
Uttoxeter ..	-	1	-	-	-	-	2	-	-	-	-	-	3	-	2	3	2	2	1	-
TOTALS ..	6	33	17	4	8	9	29	12	5	16	6	11	23	22	17	15	27	39	30	4



Table showing the number of cases of certain Infectious Diseases notified in each sanitary area during the year ended 31st December, 1972, and the Attack-Rates per 1,000 of the population.

URBAN

DISTRICT	Estimated Population 1972 for calculating rates	Food Poisoning		Scarlet Fever		Whooping Cough		Dysentery		Acute Meningitis		Measles		Ophthalmia Neonatorum		Infective Jaundice		Malaria	
		C	R	C	R	C	R	C	R	C	R	C	R	C	R	C	R	C	R
Aldridge-Brownhills	..	2	.02	48	.54	—	—	6	.07	4	.04	213	2.40	1	.01	15	.17	1	.01
Biddulph	..	1	.05	5	.28	—	—	—	—	—	—	101	5.62	—	—	—	—	—	—
Cannock	..	2	.04	42	.75	1	.02	9	.16	—	—	62	1.10	6	.11	2	.04	—	—
Kidsgrove	..	—	—	—	—	—	—	—	—	—	—	156	7.00	—	—	—	—	—	—
Leek	..	1	.05	9	.47	—	—	—	—	—	—	43	2.22	—	—	—	—	—	—
Lichfield	..	3	.13	4	.17	2	.09	—	—	4	.17	384	16.57	1	.04	1	.04	—	—
Newcastle	..	20	.26	8	.10	—	—	—	—	—	—	264	3.43	—	—	6	.08	—	—
Rugeley	..	—	—	2	.08	1	.04	—	—	—	—	20	.85	—	—	—	—	—	—
Stafford	..	—	—	11	.20	5	.09	—	—	—	—	295	5.41	1	.02	—	—	—	—
Stone	..	1	.09	—	—	—	—	—	—	—	—	213	19.42	—	—	—	—	—	—
Tamworth	..	4	.09	4	.09	—	—	1	.02	7	.16	59	1.35	—	—	3	.07	—	—
Uttoxeter	..	—	—	—	—	—	—	—	—	—	—	1	.11	—	—	—	—	—	—

# RURAL

DISTRICT	Estimated Population 1972 for calculating rates	Food Poisoning		Scarlet Fever		Whooping Cough		Dysentery		Acute Meningitis		Measles		Infective Jaundice		Ophthalmia Neonatorum	
		C	R	C	R	C	R	C	R	C	R	C	R	C	R	C	R
Cannock .. ..	45,180	—	—	2	.04	3	.07	1	.02	—	—	47	1.04	1	.02	—	—
Cheadle .. ..	40,970	1	.02	8	.20	5	.12	—	—	—	—	121	2.95	1	.02	—	—
Leek .. ..	13,120	—	—	4	.30	—	—	—	—	—	—	62	4.73	—	—	—	—
Lichfield .. ..	61,030	18	.29	—	—	3	.05	7	.11	—	—	419	6.87	4	.07	1	.02
Newcastle .. ..	22,080	1	.05	1	.05	—	—	—	—	—	—	109	4.94	—	—	—	—
Seisdon .. ..	39,230	—	—	17	.43	—	—	2	.05	—	—	22	.56	1	.03	—	—
Stafford .. ..	24,660	—	—	1	.04	—	—	—	—	—	—	61	2.47	3	.12	—	—
Stone .. ..	21,700	—	—	—	—	—	—	3	.14	—	—	73	3.36	—	—	—	—
Tutbury .. ..	25,030	1	.04	1	.04	1	.04	—	—	1	.04	28	1.12	5	.02	—	—
Uttoxeter .. ..	11,930	—	—	—	—	2	.17	1	.08	—	—	27	2.26	—	—	—	—

# SECTION III

## LOCAL HEALTH SERVICES

## ADAPTATIONS OF HOMES FOR INSTALLATION OF ARTIFICIAL KIDNEY MACHINES

The scheme for the provision of artificial kidney machines in patients' homes for the treatment of chronic renal failure has now been in operation for five years and has proved most successful. These machines, which purify the blood, had, prior to 1967, been available only at Hospital Renal Units where the patient was required to attend on two or three occasions weekly for this essential treatment.

Suitable patients are trained at the Renal Unit to operate the machine at home with the assistance and support of family members. Treatment at home is far more convenient and the use of the machine at night time whilst sleeping expedites the resumption of the individual's normal occupation, as day time routine is not disturbed. The transfer to home dialysis also enables optimum use to be made of limited hospital facilities.

Before a kidney machine can be installed in a patient's home structural modifications and adaptations are necessary. Alternatively, where the existing living accommodation is insufficient to enable a specific bedroom or downstairs room to be adapted some form of portable building can be sited adjacent to the property and may, of course, be moved when no longer required.

It is the County Health Department's function to investigate the home circumstances and, in conjunction with the Architect's Department, to arrange for any necessary adaptation or supplementation of the accommodation.

Hospital Authorities provide and maintain the intermittent haemodialysis (artificial kidney) equipment and the supportive services. They also pay for the extra cost of electricity and for the installation and rental of a telephone where this is required. They do not, however, have powers to make adaptations to the home.

A patient being treated at home needs a room with space for a single bed, the dialysis equipment and a sink with an adequate supply of water. The walls and ceiling of the room have to be made impermeable and washable. Storage space for one month's supply of sterile dressing and containers of concentrated fluids is needed and the premises also require special electrical wiring, plumbing to the sink and waterproof floor covering.

In June 1972 the Authority reviewed the arrangements whereby patients had been required to contribute towards adaptation costs, according to their means, and from that date decided to introduce a completely free service.

By the end of 1972 22 patients had been referred for home dialysis since the scheme began and 9 were using a machine at home at that time.



## ADMISSION OF CHRONIC SICK TO HOSPITAL

During the year the number of cases referred by general practitioners was 828, the object being to ensure that any necessary domiciliary care is supplied.

The figures for 1972 are probably not a true reflection of the movement of chronic sick cases since, following the appointment of Geriatrician Consultants by the Hospital Management Committees, a number of cases are referred by the general practitioners direct to the Consultants. This practice will, no doubt, increase in the future.

In addition, family doctors in the fringe areas of the County arrange for their patients to be admitted to chronic sick hospital accommodation outside the County, and the cases are not notified to the Area Medical Officers.

The following are the general (known) statistics relating to chronic sick cases.

1. Of the total referrals, the following action was taken:—

(a)	Admitted to Chronic Sick Hospital accommodation	..	426
(b)	Mental Hospitals	.. .. .	3
(c)	Part III Accommodation	.. .. .	11
(d)	General Hospitals	.. .. .	19
(e)	Died prior to admission	.. .. .	50
(f)	Application Cancelled	.. .. .	6
(g)	Temporary stays	.. .. .	35
(h)	Transfers to other Hospitals	.. .. .	2
(i)	Patient refused admission	.. .. .	24
(j)	Referred to Bucknall Hospital	.. .. .	5

2. Of the above figures, in 295 cases the County Council Services were of some assistance prior to the various courses of action being taken.

3. Of the total referrals, 125 cases were cared for at home and assistance was given in accordance with the following:—

(a)	Nursing	.. .. .	52
(b)	Domestic Help	.. .. .	21
(c)	Social Welfare	.. .. .	3
(d)	Nursing and Domestic Help	.. .. .	38
(e)	Domestic Help and Social Welfare	.. .. .	2
(f)	Nursing, Domestic Help and Social Welfare	.. .. .	9

## AMBULANCE SERVICE

The Ambulance Service continued to provide a comprehensive service to the community and endeavoured to ensure a very high standard of performance.

The programme to provide purpose-built Ambulance Stations throughout the County was completed in the course of the year by the erection of the last Ambulance Station in the programme at Wombourne. This came into operation during July, 1972, and provides a direct service for the Seisdon area from 0800–2400 hours, Monday to Friday, and Saturday mornings from 0800–1200 hours. During the closure hours of this Station, Ambulance Service Transport is provided by the Wolverhampton and Dudley County Borough Ambulance Service on a mutual aid basis, and this arrangement is working well.

During the year Day Hospital facilities have been extended considerably, and to provide Ambulance Service transport for these units, a special Outpatient Section has been introduced, with Staff employed either full-time or part-time to fulfil this role. By the employment of such personnel, whose duties are to transport non-urgent cases to Day Hospitals and Outpatient Centres, the trained Staff of the Ambulance Service have been able to concentrate on the removal of the types of case requiring the skills for which they are trained. These arrangements are proving beneficial to the Staff and patients, and the newly formed Outpatient Section of the Ambulance Service will be developed as time and circumstances permit.

### MILEAGE, PATIENTS CARRIED, VEHICLES, ETC.

The table below gives the mileage and number of patients carried by each Ambulance Station during 1972, together with the establishment of personnel and vehicles as at the 31st December, 1972.

STATION	Hours Open	Personnel	VEHICLES		AMBULANCES		DUAL PURPOSE	
			Ambs.	Dual P'pose	Mileage	Patients	Mileage	Patients
Aldridge .. ..	24	25	4	5	88,765	11,951	89,841	14,434
Biddulph .. ..	16	6	1	2	22,964	3,075	29,512	5,010
Cannock .. ..	24	28	4	5	128,937	11,499	127,209	16,537
Cheadle .. ..	24	22	3	4	72,582	7,708	87,906	13,312
Kidsgrove .. ..	16	7	2	1	34,139	5,590	28,310	5,597
Leek .. ..	24	25	4	4	73,772	7,775	79,323	11,491
Lichfield .. ..	24	26	5	4	116,091	16,102	66,701	9,486
Newcastle .. ..	24	30	5	5	94,064	13,951	88,353	17,280
Rugeley .. ..	16	7	2	1	66,484	7,813	36,523	5,101
Stafford .. ..	24	29	5	4	120,705	12,459	86,756	11,780
Stone .. ..	16	6	1	2	35,323	4,461	51,874	6,529
Tamworth .. ..	16	16	2	3	53,095	9,177	86,736	14,675
Uttoxeter .. ..	24	24	3	4	74,600	6,815	107,490	11,027
Wombourne .. ..	16	16	1	2	11,417	1,544	17,317	2,199
County Control ..	24	24	—	—	—	—	—	—
Training Vehicles ..	—	—	2	2	—	—	—	—
Major Inc./Recovery	—	—	1	—	—	—	—	—
Outpatient Vehicles	—	—	—	3	—	—	—	—
Total .. ..	—	281	45	51	992,939	119,920	983,851	144,458
From 24th July 1972	—	—	—	—	—	—	—	—

The analysis of the types of patient carried is given below:—

Maternity	..	3,766
Illness	.. ..	252,989
Accidents	..	7,204
Infectious	..	129
Mental	.. ..	290

The following is a comparison of the number of Stations, personnel, vehicles, patients carried and mileage at the 31st December, 1972 with the number at 31st December, 1971:—

			31/12/71	31/12/72
24 hour Stations	.. ..		8	8
Sub-Stations	.. ..		5	6
Ambulances	.. ..		43	45
Dual-purpose	.. ..		47	48
Outpatient Vehicles	.. ..		—	3
Personnel	.. ..		272	281
Patients Carried	.. ..		254,766	264,378
Mileage	.. ..		1,844,611	1,976,790
Average miles per patient carried			7.24	7.47

#### AGENCY SERVICE

The following table shows the mileage run and patients carried by the Hospital Car Service in the Stafford and Lichfield Areas:—



	1971			1972		
	Stafford		Lichfield	Stafford		Lichfield
Month	Mileage	Patients Carried	Mileage	Patients Carried	Mileage	Patients Carried
January	3,422	74	1,349	6,517	3,971	140
February	1,873	43	1,382	7,913	4,280	93
March	3,323	56	1,044	9,338	5,215	95
April	4,173	132	1,340	5,770	3,426	67
May	3,161	106	2,154	7,193	5,225	77
June	3,237	106	1,759	4,522	1,847	48
July	4,446	148	1,612	4,284	2,150	50
August	3,736	74	641	5,258	1,719	46
September	4,372	120	2,102	4,917	2,803	64
October	4,593	118	3,025	5,112	3,301	90
November	5,021	186	3,882	4,888	2,878	82
December	6,295	200	3,971	5,538	1,528	32
Total	47,652	1,368	24,261	71,250	38,383	864



## ATTENDANCES AT CLINICS

### CHILD HEALTH CLINICS

At the end of the year there were 103 premises in use of which 30 are purpose-built (including 6 Health Centres), 12 adapted, 3 in General Practitioner Surgeries and 58 occupied on a sessional basis.

The following are particulars of the number of sessions and attendances made during the year:—

No. of sessions .. .. . 5,591

No. of children who attended during the year  
and who were born in:—

1972 .. .. . 10,205

1971 .. .. . 6,728

1967-70 .. .. . 6,211

Total .. .. . 23,144

No. of attendances made by children:—

Born in 1972 .. .. . 69,974

Others under 5 .. .. . 99,778

Total .. .. . 169,752

### ANTE-NATAL AND POST-NATAL CLINICS

4,188 sessions were held during the year as follows:—

Medical Officers .. .. . 25

Midwives .. .. . 4,163

3,198 expectant mothers attended the Ante-Natal Clinics.

411 persons attended the Post-Natal Clinics.

Where treatment is required, the patient is referred, other than for unsatisfactory dental conditions, to her own doctor. Dental treatment can be given under the County Council Scheme and the patients are offered the facilities locally available.

### MOTHERCRAFT AND RELAXATION CLASSES

Number of women who attended during the year .. .. .	(a) Institutional booked	2,591
	(b) Domiciliary booked	294
	(c) Total	2,885
Total number of attendances during the year ..		14,737

### HEARING TESTS FOR YOUNG CHILDREN

(a) Number of children screen tested .. .. . 10,084

(i) at clinic .. .. . 8,077

(ii) at home .. .. . 2,007

(b) Number of children who failed .. .. . 264

All children who fail the test are re-tested at a later date. Those who still do not pass the test are referred for appropriate treatment to their General Practitioner or to Specialists.

#### DEVELOPMENTAL SCREENING BY HEALTH VISITORS

During the last three years Health Visitors have received in-service training to enable them to undertake screening of children in the 0-5 years age group to assess developmental progress.

(a)	Number of children screened	..	..	..	13,158
	(i) at Clinic	..	..	..	9,951
	(ii) at Home	..	..	..	3,207
(b)	Number referred for investigation	..	..	..	239

#### EYE TESTING

Number of children tested for squint 3,060.

### BUILDING PROGRAMME FOR HEALTH CENTRES AND CHILD HEALTH CLINICS

The Silverdale Health Centre, which is administered by the Delegated Health Authority of Newcastle-under-Lyme Municipal Borough opened in February. This was the sixth Health Centre opened by the County Council.

#### FUTURE PROGRAMME

The St. Chad Health Centre, Lichfield, became operational early in 1973 and Health Centres are under construction at Kidsgrove, Glascote, Barton-under-Needwood and Tutbury. Extensions to the existing Rugeley Health Centre are also being undertaken. A new Child Health Clinic, the first for several years, is under construction at Blythe Bridge. Other projects scheduled to commence during 1973/74 are as follows:—

Brownhills Health Centre  
Leek Health Centre  
Stafford (Weeping Cross) Child Health Clinic

The forward planning programme approved by the County Council for submission to the newly constituted Area Health Authorities, includes the following Health Centres and Child Health Clinics:—

Audley Health Centre  
Barlaston Health Centre  
Lichfield (Central) Health Centre  
Tamworth Health Centre (Extensions)  
Stone Health Centre  
Yoxall Health Centre  
Stafford Health Centre  
Cheadle Health Centre (Extensions to existing clinic)  
Hednesford Health Centre (Extensions to existing clinic)  
Werrington Health Centre  
Wilnecote Health Centre  
Norton Canes Clinic

Newcastle (Bradwell) Clinic  
 Endon Clinic  
 Newcastle (Thistleberry) Clinic  
 Uttoxeter Clinic  
 Newcastle Health Centre/Clinic  
 Clayton Health Centre  
 Cannock (Hawks Green) Health Centre  
 Perton Health Centre  
 Walsall Wood Clinic  
 Rushall Clinic.

#### HIRED PREMISES

The following lists the hired accommodation opened or closed during the year:—

*Premises opened:*           Branston Congregational Hall  
                                   Chasetown Methodist Schoolroom

*Premises closed:*        Branston Parish Hall  
                                   Wilnecote Community Centre  
                                   Chasetown Mining College.

#### CERVICAL CYTOLOGY

The County Council's Cervical Cytology Service commenced in May 1966 and the number of women who had been examined by the end of the year was approximately 35,500. This figure does not include women who have returned for retest examinations or subsequent examinations following the first test.

The clinics in operation at the end of 1972 were at:—

Cheadle	Cannock
Leek	Hednesford
Kidsgrove	Chase Terrace
Stone	Codsall
Stafford	Wombourne
Uttoxeter	Kinver
Rugeley	Lichfield
Tamworth	

In addition occasional sessions were held at Penkridge, Biddulph and Ashley for the convenience of local people.

Advertising literature continues to be distributed throughout the County and advertisements are published periodically in the local press. Application forms are available at all the clinics and in many doctors' surgeries.

Unfortunately, the women with large families who are most at risk, are in general the least anxious to make use of the service. However, they are encouraged to take advantage of the service which, if necessary, is provided on a domiciliary basis.

A computerized recall system is in operation but the proportion defaulting despite reminders continues to be a disappointing feature of the scheme, which affords women a valuable form of protection against a serious and, indeed, potentially fatal condition.



## CHIROPODY SERVICE

The early months of the year showed an improved staffing position which brought about a greater stability within the Service, and enabled extended use to be made of the Appliance Laboratory facilities. As the year progressed, the number of full-time chiropodists in post was 9, which exceeded the maximum employed in the previous year.

Discussions were held between representatives of the Social Services and Health Departments concerning the possibility of the Chiropody Service required in residential homes being provided through the Health Committee Service. It was agreed between the respective Committees that such an arrangement seemed desirable, and in June the necessary administrative changes were effected to introduce the new arrangements. At the same time the opportunity was taken to review the needs of the Homes to ensure an adequate level of service was being provided. The transfer was carried out smoothly and successfully and it is hoped that the greater resources of the County Service will result in improved chiropody care in the Homes.

### *Staff in Post at 31st December, 1972*

			<i>Whole-time</i>		<i>Part-time</i>
Administrative County	..	..	9	..	16
Newcastle M.B.	..	..	1	..	1
Aldridge-Brownhills D.A.	..		—		4

## ELDERLY PATIENTS

It is regrettable that the majority of elderly patients seem to regard chiropody treatment as something that once started must be maintained indefinitely. Although there are undoubtedly some patients who will require this type of care it is not generally appreciated that the type of treatment required varies considerably. The seemingly insoluble problem, however, is still the excessively long waiting periods between treatments, which detracts from optimum care. If patients could initially be given frequent treatments associated with other types of care, such as provision of appliances, where appropriate, then it might be possible to see some dramatic change in the overall pattern of treatments.

However, as the staffing position improves, the increasing demand for treatment prevents any radical change in approach. In the actual treatment of elderly patients, much time is taken by the purely physical problems of removing hosiery and footwear and the mechanics of getting the patient into and out of the chair. In an effort to assist patients and facilitate the work of the chiropodist the Health Committee have introduced a new category of staff, called a chiropodial attendant. The attendant can only work under the supervision of a chiropodist and is concerned with those personal tasks made difficult because of advancing years, and other procedures not requiring the special skills of a chiropodist. The attendants were first appointed towards the end of the year, and present trends indicate that they will usefully contribute towards improved standards and increased numbers of treatments.



## SCHOOL WORK

Whilst the actual number of centres providing a chiropody service for school children remains more or less the same, the actual numbers of treatments carried out were substantially higher than the previous year. This increase was in part derived from the improved staffing position, and also from concentrating the available resources on a restricted number of treatment centres. Already there has been a significant increase in the number of appliances being constructed for school children, many of which result from requests from the School Medical Officers.

As with the previous year, the chiropodists were not actively involved in school inspections because of the high demands for clinical work. The time-consuming treatment of verrucae tends to dominate treatments and severely restricts the amounts of other work that can be undertaken.

The general incidence of foot problems among school children is still far too high, and ill-fitting foot-wear seems to contribute to a major proportion of the conditions encountered. Current shoe vogue is beginning to produce problems normally not found in school children. It appears that the tendency for higher heeled shoes to be worn among girls in the lower senior school age group is bringing about painful conditions of the fore-foot. It is unfortunate that more health education work cannot be undertaken to highlight the long term dangers of ill-fitting foot-wear.

The use of chiropodial attendants in school work has been highly successful, and has contributed towards higher numbers of children seen, and enabled far better use to be made of the chiropodists' special skills.

## APPLIANCE SERVICE

On the whole the year was a reasonably satisfying one for the Appliance Service as the staff became more conversant with the techniques and range of appliances that could be constructed. An interesting feature was the general reaction of the public who, in many instances, telephoned the laboratory to enquire whether they might be eligible for a foot appliance. As with other aspects of the Chiropody Service, the increasing productivity of the Appliance Laboratory tends further to stimulate the demand for its services. In August a full-time Laboratory Technician was appointed, and, after an initial period of training, this post should result in a significant increase in output from the laboratory.

One of the most difficult aspects in providing chiropodial appliances is the problem of convincing patients of the need for larger shoes to accommodate the appliances. In those cases where this is done the success of the appliances and response from the patients is most gratifying. There is an indication at present that more initial success in appliance work is derived in work amongst school children, perhaps because their shoes do, of necessity, have to be changed at comparatively short intervals of time. However, many elderly patients who would suffer considerable pain and discomfort through excessively long periods between treatments have been able to manage in reasonable comfort by the careful prescription of an appliance.

The potential value of the Appliance Service has yet to be demonstrated and will to some extent depend upon the continued support of an adequate full-time staff, and additional research and development, to improve and extend the range of appliances made.

## TREATMENTS

The total number of treatments carried out during 1972 was as follows:—

	<i>Clinic</i>	<i>Domiciliary</i>
Elderly patients (including handicapped patients) . .	24,618	15,472
Schoolchildren . . . . .	13,356	—

4,044 treatments were given to residents in Welfare Homes.

During the year 1,011 elderly patients were admitted to the register. Unfortunately, at the end of the year a deterioration in the full-time staff in post was in prospect with advance notice of a number of resignations. In the event of replacement staff not being appointed, the Chiropody Service will undoubtedly suffer a strained period due to the additional commitments taken on during an improved period and the same work loads to carry with fewer staff to cover the work.

## CHILDREN ON THE DEFECTS REGISTER

Evaluation of the “At Risk” Register indicated that its maintenance was not justified and with effect from 1st March, 1972 it was replaced by the Defects Register. This had the effect of reducing the number of children notified by confining the referrals to those suffering from the more significant established physical or mental defects. When the Defects Register was opened the number of children included was 501 and at the 31st December the total had risen to 773.

## CONGENITAL MALFORMATIONS

In 1972, 144 infants were notified as suffering from some form of congenital abnormality and these cases were reported to the Director and Registrar General, Office of Population Censuses and Surveys, who keeps under surveillance the incidence of the various malformations in order to identify any significant emergent factor as early as possible.

Details of cases notified include information on the age of the mother, drugs taken during pregnancy and the number of previous live or still births. The School Health Section is notified of children with certain defects at the age of two years and of their progress at their six monthly reviews or when information is received from a Consultant. This enables provision to be made for their long term care.

The following table is informative in that it gives the monthly notifications of children suffering from congenital malformations under their respective categories.



## TABLE OF CONGENITAL NOTIFICATIONS 1972

Congenital Malformations	Jan.	Feb.	Mar.	Apr	May	Jun.	July	Aug.	Sept.	Oct.	Nov.	Dec.
Central Nervous System .. ..	—	1	1	2	9	1	—	4	1	1	—	4
Eye and Ear .. ..	—	—	—	2	2	1	—	—	1	—	—	—
Alimentary System .. ..	1	1	1	1	3	—	—	1	2	2	1	—
Heart & Circulatory System .. ..	1	2	2	3	2	1	3	1	3	3	1	—
Respiratory System .. ..	1	—	—	—	—	—	—	—	—	—	—	—
Urino-genital System .. ..	1	—	—	2	4	1	2	2	2	—	1	—
Limbs .. ..	1	3	4	5	3	4	4	2	2	2	2	3
Other parts of Musculo Skeletal System	—	—	—	—	—	—	—	—	—	—	1	—
Other Systems .. ..	—	—	—	—	2	—	1	1	1	1	—	—
Other Malformations	3	1	1	2	3	3	4	—	1	1	1	1
Totals .. ..	8	8	9	17	28	11	14	11	13	10	7	8

Grand total of congenital malformations for 1972 as notified to the Director and Registrar General, Office of Population Censuses and Survey, on form SD 56, 144.

### CO-ORDINATION AND CO-OPERATION OF HEALTH DEPARTMENT DOMICILIARY STAFF WITH THE HOSPITAL AND FAMILY DOCTOR SERVICE

Co-operation between Health Visitors, Home Nurses, Midwives and hospital staff has increased steadily during the year, resulting in a greater understanding of the part each plays in patient care.

Community staff have been invited to attend study days in the Mid-Staffs. Hospital Group, and in Walsall.

Invitations to join lunch-time/evening/Saturday lectures and symposia have been extended to the nursing staff from the North Staffs., Mid-Staffs., and South Staffs. Post-Graduate Medical Institutes, and many staff have availed themselves of these opportunities.

Attachment to general practices of Health Visitors, Home Nurses and Midwives has progressed steadily in the County, and should be complete by the end of 1973.

Liaison arrangements with hospitals serving the County have continued, and have been extended to more wards and departments. Dr. W. D. H. McFarland, Administrative Medical Officer for the Stafford Area, continues his duties as an honorary member of the staff of the Staffordshire General Infirmary and acts as liaison officer between the hospital and domiciliary services. A home nursing sister visits the hospital daily for liaison purposes and this is proving to be of great value.

### DENTAL CARE

The table overleaf summarises the work of the Dental Service for Expectant and nursing mothers and children under five years.

*Part A. Attendances and Treatment* (the figures in brackets are those for 1971).

	<i>Children 0-4 (incl.)</i>		<i>Expectant &amp; Nursing Mothers</i>	
No. of visits for treatment during year				
First Visit .. .. .	861	(689)	144	(111)
Subsequent Visits .. .. .	720	(462)	246	(171)
Total Visits .. .. .	1,581	(1,151)	390	(282)
No. of additional courses of treatment other than the first course com- menced during year .. .. .	53	(33)	3	(2)
Treatment provided during the year—				
No. of Fillings .. .. .	1,253	(794)	321	(248)
Teeth filled .. .. .	1,137	(677)	295	(227)
Teeth extracted .. .. .	1,159	(1,186)	248	(151)
General anaesthetics given .. .. .	394	(428)	7	(12)
Emergency visits by patients .. .. .	263	(258)	31	(22)
Patients X-rayed .. .. .	11	(3)	55	(15)
Patients treated by scaling and/or re- moval of stains from the teeth (prophylaxis) .. .. .	139	(64)	72	(27)
Teeth otherwise conserved .. .. .	—	(71)	—	(—)
Teeth root filled .. .. .	—	—	2	(2)
Inlays .. .. .	—	—	—	(—)
Crowns .. .. .	—	—	—	(2)
No. of courses of treatment completed during the year .. .. .	789	(617)	114	(74)
<i>Part B—Prosthetics:</i>				
Patients supplied with F.U. or F.L. (first time) —	—	(—)	(6)	(—)
Patients supplied with other Dentures .. —	—	(—)	(16)	(—)
Number of Dentures supplied .. .. .	—	(—)	(26)	(—)
<i>Part C—Anaesthetics:</i>				
General Anaesthetics administered by Dental Officers .. .. .	..	..	14	(117)
<i>Part D—Inspections:</i>				
Number of patients given first inspec- tions during year .. .. .	1,208	(1,342)	159	(106)
Number of patients who required treatment .. .. .	740	(760)	151	(97)
Number of patients who were offered treatment .. .. .	717	(740)	150	(97)
Number of Patients re-inspected during year .. .. .	31	(33)	2	(2)
<i>Part E—Sessions:</i>				
No. of Dental Officer Sessions ( <i>i.e.</i> .. For Treatment			401	(256)
equivalent complete half days) de- For Health Edcn.			6	(9)
voted to M. & C.W. patients				



## WELFARE FOODS

National Welfare Foods are sold in Clinics and Health Centres in the County and are also available in a number of shops mainly in rural areas. In the Northern part of the County a van makes regular journeys to fixed points in outlying districts where the driver then sells these foods to people who are unable to attend Clinics.

There has been some increase in the number of people receiving free vitamins following the Welfare Food Amendment Order. An expectant or nursing mother with two children under school age is now entitled to free vitamins in addition to free welfare milk regardless of income. This also applies to all but the first two children in families with three or more children under school age.

In addition to National Welfare Foods, certain proprietary brands of infant foods are available in Clinics and Health Centres during Clinic Sessions.

## HEALTH EDUCATION

The essential objective of Health Education is the achievement of high standards of personal and community health. The policy of this Section is to use all possible channels of communication to achieve this end. However, it also constitutes an important element of the work of many other members of the Health Department staff who make valuable contributions in this very varied field.

### SCHOOLS

For children in primary and secondary schools, it is important that they are presented with factual information on all subjects relating to their health and developing maturity. It is essential that children be made aware of the need for the foundation of sensible habits, thereby trying to avoid many of the present day illnesses and disabling conditions notably cancer, bronchitis, heart disease and obesity with its sequelae.

### PARENT-TEACHER ASSOCIATIONS

Meetings of these associations make possible staff involvement with parents, teachers, and in some cases, invited pupils. Some parents feel a little confused and anxious over the early physical maturation of their children and apart from sex education many aspects of health education are discussed. This can promote a deeper understanding of their children's needs and also re-inforce the supportive role of parents.

### MADELEY COLLEGE OF EDUCATION

Health education lectures for the student teachers at the College, are now an integral part of their syllabus. Such lectures are primarily for the student's own information but it is to be hoped that this basic knowledge will provide a foundation from which to work when qualified.

### CHILD HEALTH CLINICS

Mobile units displaying the dangers of smoking, accidental poisoning, foot health, dental health, baby safety and fire safety were exhibited in clinics throughout the county. Many demonstrations of the 'Kiss of Life' were given both to ante-natal mothers and mothers of young children as part of a water safety campaign.

## EXHIBITIONS AND CAMPAIGNS

The theme of the Health Department's contribution to the County Show in May was nutrition. This appeared to arouse a great deal of public interest. The section dealing with obesity attracted much attention from all age groups. It was also decided to organise a display on the theme 'Fit for Life' at the County Fair held in September. This consisted of various tests for fitness including eye sight, hearing, lung capacity (including anti-smoking display) and weight testing. These exhibits brought much person-to-person health education and the participation of the public made it very worthwhile. A dental health week was organised for primary schools which involved 'Pierre the Clown'. He visited 35 schools during the week and generated a great deal of enthusiasm.

## SMOKING AND ASSOCIATED ILLNESSES

Continued emphasis to this subject is given in the schools and to all adult groups where feasible. This applies particularly to the ante-natal clinics and the mothers-to-be attending them in view of the well recognized additional hazards of smoking during pregnancy. Presentation of material and distribution of literature is given high priority in an effort to combat the ever increasing pressures of the mass media on young impressionable minds. The restriction of smoking in some public places is to be commended but the scheme needs to be far more widespread to bring about possible change in attitudes.

## SEXUALLY TRANSMITTED DISEASES

This is another area of high priority for the dissemination of factual information, discussion, and the distribution of leaflets to counter the ignorance and myth that still surround the problem of venereal disease. This subject is included on senior school health education programmes.

## CERVICAL CYTOLOGY

Continued support is given to health visitors and midwives in encouraging women to attend cytology clinics for this very important periodic test.

It is gratifying to note the increasing numbers of requests for talks on cancer education.

<i>Lecture Details</i>	<i>No. of Lectures</i>	<i>Attendance</i>
Secondary Schools—301 programmes	708	.. 5,468
Junior Schools—110 programmes ..	568	.. 3,486
<i>Other Groups</i>		
Alcoholism .. ..	2	.. 20
Accident Prevention .. ..	6	.. 95
Cancer Education .. ..	13	.. 366
County Health Services .. ..	3	.. 100
Dental Health .. ..	6	.. 250
Drug Dependence .. ..	21	.. 652



Family Planning	..	..	..	2	..	145
First Aid..	..	..	..	5	..	95
Food Hygiene	..	..	..	5	..	170
Foot Health	..	..	..	1	..	20
Health Education for Students			..	20	..	1,315
Nutrition	..	..	..	6	..	180
Parent Craft	..	..	..	7	..	167
Personal Hygiene	..	..	..	4	..	77
Personal Relationships			..	16	..	771
Resuscitation	..	..	..	25	..	665
Sexually Transmitted Diseases			..	15	..	759
Smoking	..	..	..	19	..	1,159

### *Special*

Parent Teacher Associations	..	..	20	..	1,206
Student—Pupil Nurses		..	18	..	252
Student Teachers	..	..	23	..	916
Technicians	..	..	142	..	3,001
Colleges of Further Education		..	4	..	50

## HEALTH VISITING

During the year the number of Health Visitors in full-time employment has fluctuated between 113 and 121, with the number in part-time employment varying between 13 and 16, plus 4 District Nurse/Midwife/Health Visitors. The number of Clinic/School Nurses employed against Health Visitor vacancies has varied from 13—14 in full-time, and 12—14 in part-time, employment. The increasing turnover of staff is consistent with national trends but recruitment has been sufficiently good to maintain numbers.

In September, 8 students from Keele University and 1 from Birmingham Polytechnic successfully completed the Health Visitors' Course and are now employed within the County.

At the end of the year under review 8 students were attending the course at Keele University and 1 the course at the Birmingham Polytechnic. Greater numbers of suitable applicants came forward but places could not be found near enough to their homes for married women to travel daily. It is hoped that the proposed Health Visiting Course at the Bilston College of Further Education will help to solve this problem.

The increased number of visits to certain age groups emphasizes that the Health Visitor, although the bulk of her work still concerns the pre-school child, is a family worker. As other workers, in particular general practitioners, to whose practices Health Visitors are becoming attached in larger numbers, and the public, are becoming more aware of her skills so her help and support is increasingly sought, but since much of her work is preventive it is difficult to measure and may be under-estimated.

HEALTH VISITING—Cases seen by Health and Tuberculosis Visitors during year.

TYPE OF CASE				Total number of cases seen (1)	Number of cases included in col (1) seen at special request of:—		Total number of Visits (4)
(If a householder rather than a person is visited, the case is included in line 6, 7 or 8, and not in lines 1–5)					Hospital (2)	G.P. (3)	
1	Children born in 1972	..	..	13,741	177	502	52,522
2	Other children aged under 5	..	..	38,688	133	370	102,331
3	Persons aged between 5 and 16 seen as part, of health visiting, (ie excluding those seen as part of school health service)			1,050	82	335	2,090
4	Persons aged between 17 and 64	..	..	7,566	423	1,225	12,483
5	Persons aged 65 and over	..	..	8,714	742	2,520	28,817
6	Households visited on account of tuberculosis	..	..	770	308	18	3,522
7	Households visited on account of other infectious diseases	..	..	223	3	76	332
8	Households visited for any other reason	..	..	1,185	179	308	2,509
9	TOTAL		..	71,937	2,047	5,354	204,606
Number of persons included in lines 1–5 above who are:—		10	Mentally handicapped	153	11	37	687
		11	Mentally ill	291	8	159	1,244



## HOME NURSING SERVICE

During the year the number of home nurses has increased steadily to 98 in whole-time and 2 in part-time employment, including 7 male nurses. Recruitment of district nurse/midwives is more difficult in some parts of the County but the number has remained constant at 41, with 4 district nurse/midwife/health visitors.

The programme of training for the National Certificate in District Nursing has been maintained, and several nurses have attended refresher courses.

With the continued practice of early discharge from hospital of selected patients following surgery, the work of the home nurses is becoming more varied, and closer working relationships with hospitals are being developed. For the first time the table of visits shows the number of patients in the different age-groups who are nursed at home, and emphasises that the bulk of the home nurses' work is still with the elderly. There is greater emphasis on community care in general nurse training and, consequently, home nurses are participating in arrangements for visits of observation for student nurses. Through this experience more nurses are becoming interested in working in the domiciliary field and recruitment of S.R.N.s is good.

### NUMBER OF VISITS DURING YEAR

<i>Type of Case</i>	<i>Number of Visits</i>			<i>Total Number of visits</i>
	<i>Under 5</i>	<i>5-64</i>	<i>65 and over</i>	
Tuberculosis .. ..	1	436	30	467
Infectious Diseases .. ..	24	54	82	160
General Nursing Care ..	156	16,357	77,047	93,560
Post Operative .. ..	87	5,917	2,126	8,130
Preparation for Diagnostic Investigation .. ..	10	365	217	592
Gynaecological Conditions ..	2	482	1,258	1,742
Genito Urinary Conditions ..	4	1,086	5,870	6,960
Dressings .. ..	911	23,837	49,961	74,709
Observations .. ..	173	4,464	13,249	17,886
Injections .. ..	414	26,891	48,274	75,579
Other Conditions .. ..	160	3,158	8,635	11,953
Totals .. ..	1,942	83,047	206,749	291,738

Number of patients who would have  
required admission to hospital if a home  
Nursing Service had not been available:

i Acute .. ..	2,324
ii Chronic .. ..	2,725

## SUPPLY OF INCONTINENCE EQUIPMENT

This service provides incontinence pads and waterproof protective clothing for approved cases.

Incontinence pads greatly assist in the nursing care of bedridden patients and save a considerable amount of additional work and unpleasantness in laundering.

Protective waterproof clothing consisting of pants and disposable interliners are issued to patients who are ambulant but incontinent, so permitting them to lead a more normal and active life than would otherwise be the case.

The heavy work load borne by the families of these cases is recognised and during the year it was decided to expand the service which has been publicised by the nursing staff with resultant considerable increase in the numbers supplied. In fact, in 1972, 204,900 pads, 633 pants and 123,600 interliners were issued, an increase of about 40 per cent above the previous year.

## MATERNAL MORTALITY

During the year three deaths were reported under the heading of Other Complications of Pregnancy and these all occurred in hospital.

The results of confidential enquiries into maternal mortality over the years have undoubtedly helped considerably to reduce not only the numbers of deaths but have also contributed to measures aimed at increasing safety in pregnancy and childbirth.

The following table gives similar information since 1952:—

Year	No. of Deaths	Deaths Occurred	
		In Hospital	At Home
1952 ..	13	10	3
1953 ..	15	13	2
1954 ..	8	8	—
1955 ..	7	6	1
1956 ..	16	15	1
1957 ..	8	7	1
1958 ..	8	7	1
1959 ..	7	5	2
1960 ..	8	7	1
1961 ..	4	4	—
1962 ..	11	9	2
1963 ..	7	4	3
1964 ..	6	4	2
1965 ..	2	1	1
1966 ..	5	5	—
1967 ..	4	2	2
1968 ..	5	5	—
1969 ..	1	1	—
1970 ..	1	1	—
1971 ..	5	5	—

## MEDICAL ASSESSMENTS AND REPORTS

This function deals with:—

1. Medical screening of candidates appointed to the Council's service to assess their fitness for admission to the appropriate superannuation and sickness pay schemes; and also their fitness for the post in question;

2. medical reports on staff at the request of employing committees following long term sickness, etc.;
3. driving licence referrals on medical grounds;
4. medical examination of entrants to training colleges for teachers and the teaching profession;
5. medical examination of applicants for Heavy Goods Vehicle Driving Licences.

All prospective employees are required in the first instance to complete a Medical Questionnaire, or short form Freedom from Infection Certificate. This procedure reduces the need for full medical examinations, which with certain exceptions, are arranged only if the information given in preliminary screening indicates this.

In other cases where further information is considered advisable the General Practitioner, or Specialist who has been treating the applicant, is approached for a report and medical opinion.

Out of a total of 2,667 candidates screened for employment, 280 underwent full medical examinations, and in a further 127 cases more detailed medical information was obtained.

Medical screening is carried out by local authorities throughout the Country on a reciprocal basis, and during the year 37 such examinations were carried out.

#### ENTRANTS TO TEACHER TRAINING COLLEGE AND THE TEACHING PROFESSION

548 candidates were medically examined for entrance to Teacher Training College, the applicants undergoing a chest x-ray examination in addition to the medical examination. 60 Entrants to the Teaching Profession also underwent a similar screening.

#### MEDICAL ENQUIRIES FOR EXISTING STAFF AND DRIVING LICENCE APPLICANTS

Reports are provided for other Departments of the County Council and the following are the statistics relevant to 1972, in the various categories:—

- |  |     |
|--|-----|
| (a) Investigations into the absence of staff for various reasons . .                     | 42  |
| (b) Enquiries with regard to premature retirement on the grounds of ill health . . . . . | 36  |
| (c) Driving licence enquiries . . . . .  | 208 |

#### HEAVY GOODS VEHICLE DRIVERS' LICENCES

During 1972, 152 County Council employees who are required to hold a Heavy Goods Vehicle Licence were medically examined for this purpose.



## MIDWIVES' SERVICE

The following are particulars of the midwives practising at the end of 1972:—

Number of midwives employed by the Authority ..	123
Number of midwives in private practice (including midwives employed in Nursing Homes):	
Domiciliary .. .. .	1
Number of midwives employed by Hospital Management Committees .. .. .	46

The following table shows the number of cases dealt with by the midwives in the area of the Local Supervising Authority during the year:—

Number of cases delivered in hospitals and other institutions but discharged and attended by domiciliary midwives	Discharged within	
	2 days	1,108
	3-7 days	7,131
	8 or more days	2,446
	TOTAL ..	10,685
Number of domiciliary confinements attended by midwives under N.H.S. arrangements .. .. .		1,516
Number of hospital confinements conducted by domiciliary midwives .. ..		214

Recruitment of Midwives has been more difficult during 1972, particularly for the combined District Nurse/Midwife posts in rural areas, and there has been a fall of 5 in the number employed. Three midwifery posts in the Borough of Newcastle-under-Lyme have also been re-designated district nursing posts, reducing the number employed by a total of 8, but with the continuing decline in the number of home confinements it has been possible to maintain the service.

Midwives have continued to attend their own booked cases at the Victoria Hospital, Lichfield, and the Bloxwich Maternity Home. In August 1972, Midwives from the Borough of Newcastle-under-Lyme began to attend booked cases on the General Practitioner Floor of the North Staffs. Maternity Unit. With the shorter stay in Hospital, domiciliary Midwives are attending more post-natal patients in their own homes.

Midwives continue to give ante-natal care to patients booked for home and hospital confinement, and to participate in Mothercraft and Relaxation Classes.

An increased number of Midwives have received training to assist in the Cytology Service and their work has been very valuable. All Midwives required to attend refresher courses under the rules of the Central Midwives Board have done so.



## MOTHERS' CLUBS

Such clubs have been in operation in this County for six years and are serving a useful purpose.

The basic idea underlying the formation of these clubs is to bring mothers of children together at regular meetings. The clubs serve two main purposes:—

- (a) They enable mothers with a common interest to meet and provide a break from the home and children;
- (b) they provide a receptive group for topics of Health Education which have a beneficial effect on the health of the mothers and their families.

In return for accepting a programme of Health Education, the County Council makes available premises for meetings, either by allowing the use of clinics, where it does not conflict with County Council functions or by paying for the hiring of accommodation where necessary.

The following assisted Mothers' Clubs were operating successfully at the end of 1972:—

Armitage	Kidsgrove
Amington	Lichfield
Ashley	Penkridge
Barton-under-Needwood	Rugeley
Cannock	Stonnall
Denstone	Two-Gates, Tamworth
Glascote	Tutbury
Great Wyrley	Uttoxeter

## NURSING ADMINISTRATION

The Nursing Service is supervised by a County Nursing Officer, Miss M. S. Newman, and a Deputy County Nursing Officer, Mrs. E. S. Smith.

The areas covered by the Area Nursing Officers are as follows:—

<i>Area</i>	<i>Area Nursing Officer</i>	<i>Deputy Area Nursing Officer</i>
<i>Area No. 1</i>		
Biddulph U.D. . .	Miss D. Austin	. . Miss E. Alcock
Leek U.D.		
Leek R.D.		
Cheadle R.D.		
Kidsgrove U.D.		
Newcastle M.B.		
Newcastle R.D.		
<i>Area No. 2</i>		
Stafford M.B. . .	Miss D. Chadwick	. . Miss J. P. Elsmore
Stafford R.D.		
Stone U.D.		
Stone R.D.		
Cannock U.D.		
Cannock R.D.		
Seisdon R.D.		

<i>Area</i>	<i>Area Nursing Officer</i>	<i>Deputy Area Nursing Officer</i>
<i>Area No. 3</i>		
Lichfield City	.. Mrs. M. E. Overend	.. Miss A. W. M. Fido
Lichfield R.D.		
Rugeley U.D.		
Tamworth M.B.		
Uttoxeter U.D.		
Uttoxeter R.D.		
Tutbury R.D.		
Aldridge—		
Brownhills U.D.		

During the year the County Council agreed to implement a nursing management structure, as recommended by the Mayston Committee, from the 1st April, 1973. Miss M. S. Newman, the present County Nursing Officer, will then assume the wider duties of Director of Nursing Services. The structure will include a Divisional Nursing Officer, 6 Area Nursing Officers, and 22 Nursing Officers, each of the latter responsible for the management of approximately 20 field staff. There will be phased implementation, the last Nursing Officers to take up post in January 1974.

The County Council has also agreed in principle to the proposals contained in Circular 13/72, issued by the Department of Health and Social Security, in which ratios of nursing staff to population are recommended. Staffing increases have been approved for the coming financial year which will improve the ratios in the County and move towards those recommended in the Circular.

In the Home Nursing Service the recommended interim ratio is one trained Nurse to 4,000 population with an ultimate ratio of 1:2500. The present County ratio is 1:5500, but will be improved to 1:4500 in 1973. In the Health Visiting Service the recommended ratio is 1:3000 where attachment schemes are in full operation and where there are many problem areas. The present County ratio is 1:4500 and will be improved to 1:4300 with increased supporting staff. No specific ratios are laid down for the Midwifery Service and it is felt that the present midwifery establishment is adequate to cover the needs of the domiciliary service.

It is anticipated that the implementation of these policies will greatly assist the Nursing Services to undertake the increasing amount of work within the community and will do much to improve morale in a time of uncertainty about the future.

### **ISSUE OF NURSING EQUIPMENT—ON LOAN**

There is an increasing demand for aids required for the nursing and general care of patients at home. Such items as special beds, hoists, commodes and bedcradles are supplied on loan, free of charge, on the recommendation of Consultants, General Practitioners and Nursing Staff. The issues are made on behalf of the local authority by the British Red Cross Society and the St. John Ambulance Association and Brigade through their various depots situated throughout the County.

A need for aids frequently follows a period of treatment as an in-patient and there is an effective liaison with the hospital service so that any necessary aids are provided, as far as possible, prior to a patient's discharge.

In the case of wheelchairs, the Department of Health and Social Security has now made arrangements for issue of these on the recommendation of the patient's family doctor or other medical practitioner, whereas formerly they were only supplied at the request of a consultant. Wheelchairs required on temporary loan will continue to be issued through the above voluntary associations.

A financial contribution is made annually to both organisations to provide for the servicing, replacement, and purchase of additional equipment.

**PREMATURITY**

The following table gives particulars of the number of premature infants who were born during 1972:—

(1) Number of Premature Live Births notified—							
(a)	In hospital	..	..	..	..	..	604
(b)	At home or a Nursing Home				..	..	25
Total							629
(2) Number of Premature Stillbirths notified—							
(a)	In hospital	..	..	..	..	..	63
(b)	At home or a Nursing Home				..	..	—
Total							63



PREMATURE LIVE BIRTHS														PREMATURE STILLBIRTHS																																					
Born in hospital														Born at home or in a nursing home																																					
Weight at birth														Nursed entirely at home or in a nursing home				Transferred to hospital on or before 28th day																																	
														Died			Died			Died			Died																												
														Total births (1)			within 24 hours of birth (2)			in 1 and under 7 days (3)			in 7 and under 28 days (4)			Total births (5)			within 24 hours of birth (6)			in 1 and under 7 days (7)			in 7 and under 28 days (8)			Total births (9)			within 24 hours of birth (10)			in 1 and under 7 days (11)			in 7 and under 28 days (12)			Born	
														Total births (1)			within 24 hours of birth (2)			in 1 and under 7 days (3)			in 7 and under 28 days (4)			Total births (5)			within 24 hours of birth (6)			in 1 and under 7 days (7)			in 7 and under 28 days (8)			Total births (9)			within 24 hours of birth (10)			in 1 and under 7 days (11)			in 7 and under 28 days (12)			Born	
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## VACCINATION AND IMMUNISATION

In 1972 the Standing Medical Advisory Committee, in light of the decision to abandon routine smallpox vaccination, issued a revised schedule of Vaccination/Immunisation procedures which was adopted by this Authority and is set out below.

Age	Antigen	Minimum Intervals	Comments
6 months ...	First Triple Antigen (Diphtheria, Pertussis, Tetanus) and one dose of oral Poliomyelitis Vaccine.		
8 months ..	Second Triple Antigen and one dose of oral Poliomyelitis Vaccine.	6-8 weeks	
12-14 months .	Third Triple Antigen and one dose of oral Poliomyelitis Vaccine.	4-6 months	
During 2nd year ... (13-15 months)	Measles Vaccine.	4 weeks	
		4 weeks	
Five years or school entry ...	Diphtheria, Tetanus Toxoid and oral Poliomyelitis Vaccine		May be given on entry to Nursery School. If no immunisation, or an incomplete basic course of immunisation has been given before normal school entry the full basic course of diphtheria, tetanus, and poliomyelitis immunisation should be given at school entry, but not pertussis.
10-13 years	B.C.G. Vaccine.		For tuberculin negative children.
13 year old girls ...	Rubella Vaccine.		
About 16 years, ... prior to leaving school	Tetanus Toxoid, Oral Poliomyelitis Vaccine.		

In the statistical tables below details are given of the number of persons under the age of 16 years who received protection during 1972:—

# VACCINATION OF PERSONS UNDER AGE 16 COMPLETED DURING 1972

Table 1.—Completed Primary Courses—Number of persons under age 16.

Type of vaccine or dose	Year of Birth					Others under age 16	Total
	1972	1971	1970	1969	1965-1968		
1. Quadruple DTPP ..	—	—	—	—	—	—	—
2. Triple DTP .. ..	573	7,128	3,035	575	419	32	11,762
3. Diphtheria/Pertussis ..	—	—	—	—	—	—	—
4. Diphtheria/Tetanus ..	24	661	426	124	510	29	1,774
5. Diphtheria .. ..	—	1	1	—	16	1	19
6. Pertussis .. ..	—	—	—	—	—	—	—
7. Tetanus .. ..	10	9	11	10	66	345	451
8. Salk .. ..	—	—	—	—	—	—	—
9. Sabin .. ..	572	7,407	3,317	712	1,232	294	13,534
10. Measles .. ..	19	2,482	2,369	659	1,809	119	7,457
11. Rubella .. ..	—	—	—	—	—	2,981	2,981
12. Lines 1+2+3+4+5 (Diphtheria) .. ..	597	7,790	3,462	699	945	62	13,555
13. Lines 1+2+3+6 (Whooping Cough) .	573	7,128	3,035	575	419	32	11,762
14. Lines 1+2+4+7 (Tetanus) .. ..	607	7,798	3,472	709	995	406	13,987
15. Lines 1+8+9 (Polio) ..	572	7,407	3,317	712	1,232	294	13,534

TABLE 1. COMPLETED PRIMARY COURSES

It is gratifying to note that the completed forms of primary protections continued to show increases over the figures for 1970 and 1971.

As regards vaccination against Rubella for girls aged 13 years, or more, the figures show a decrease from 1971. However, as this was the first year for this vaccination to be offered, more than one year were eligible and took the opportunity, so inflating the figure for that year and the current year's figures are likely to be more representative of the normal rate.

Table 2.—Reinforcing Doses—Number of persons under age 16.

Type of vaccine or dose	Year of Birth					Others under age 16	Total
	1972	1971	1970	1969	1965-1968		
1. Quadruple DTPP ..	—	—	—	—	—	—	—
2. Triple DTP .. ..	1	131	223	65	1,035	116	1,571
3. Diphtheria/Pertussis ..	—	—	—	—	—	—	—
4. Diphtheria/Tetanus ..	—	8	40	103	8,146	843	9,140
5. Diphtheria .. ..	—	—	3	—	44	8	55
6. Pertussis .. ..	—	—	—	—	—	—	—
7. Tetanus .. ..	3	1	13	34	331	3,793	4,175
8. Salk .. ..	—	—	—	—	—	—	—
9. Sabin .. ..	8	142	247	156	10,009	5,149	15,711
10. Measles .. ..	—	—	—	—	—	—	—
11. Lines 1+2+3+4+5 (Diphtheria) .. ..	1	139	266	168	9,225	967	10,766
12. Lines 1+2+3+6 (Whooping Cough) ..	1	131	223	65	1,035	116	1,571
13. Lines 1+2+4+7 (Tetanus) .. ..	4	140	276	202	9,512	4,752	14,886
14. Lines 1+8+9 (Polio) ..	8	142	247	156	10,009	5,149	15,711

TABLE 2. REINFORCING DOSES

These doses are offered on entry into primary school and again when leaving secondary school. The figures compare reasonably favourably with previous years although a decrease is noticed from the 1971 figures due to the fact that in that year a previous back-log was cleared, so inflating the figures.

#### RUBELLA—STAFF PROTECTION

The Joint Committee on Vaccination and Immunisation have reviewed the question of vaccinating women of child-bearing age against Rubella (German Measles) and, although not recommending routine vaccination, did advise that women considered to be at special risk should be offered protection. Individuals within this category are teaching and nursery staff, nurses, and staff of ante-natal clinics employed within the Health, Education and Social Services Department.

Such a policy had previously been adopted by the County Council and the procedure is to offer a blood test in the first instance to establish the degree of immunity and subsequent vaccination should this prove to be necessary. To minimise disruption of classes, etc., a sampling team visits each school or other appropriate establishment to take blood samples. The level of immunity is then established by the Public Health



Laboratory Service, the co-operation of which is much appreciated, and the results notified to the staff and their respective general practitioners. Any staff found to be susceptible to the disease are either vaccinated at their place of work or at a convenient Child Health Clinic.

The sampling programme is drawn up on a geographical basis and during the year, staff in the Stafford Rural and Urban areas were circularised. The response was most encouraging, 80 per cent of those eligible agreeing to take part in the scheme.

**SMALLPOX VACCINATION**

Smallpox vaccination is no longer undertaken as a routine procedure, and statistics are, therefore, no longer recorded.

**GENERAL**

Vaccination statistics are forwarded to the Department of Health, which publishes a complete list of all local authority vaccination rates. The table below compares the Staffordshire rates with the average for England as a whole. The figures relate to primary courses only.

	<i>Percentage of Children born in 1970 and vaccinated by 31-12-72</i>		
	<i>Whooping Cough (1)</i>	<i>Diphtheria (2)</i>	<i>Polio myelitis (3)</i>
England .. ..	79	81	80
Staffordshire .. ..	79	86	82

It is pleasing to note that the rate achieved in the County compares favourably with that for the Country as a whole.

During the year a system was introduced whereby parents of infants attending clinics are issued with a permanent record card showing details of all vaccinations and immunisations given from birth to school-leaving. It is hoped that this will, in addition to being a convenient reference for parents, doctors and nursing staff, assist in increasing the acceptance rate for all vaccinations offered under the service and help publicise the scheme.

**B.C.G. VACCINATION**

Routine tuberculin testing followed by B.C.G. vaccination, if necessary, continued to be offered to eleven-year old children under the Authority's arrangements for schoolchildren as well as for those in approved schools and students at Technical and other establishments for further education, together with any other children who have missed it in previous years for various reasons.



Particulars of vaccinations done during 1972 and the previous 3 years are as follows:—

	1972	1971	1970	1969
Number of children eligible ..	12,218	12,573	11,325	12,869
Number of acceptances .. ..	9,897	9,912	8,990	9,668
Acceptance rate .. .. .	81%	78%	79%	75%
Number tuberculin tested .. ..	9,821	9,689	8,704	9,129
Number vaccinated (neg. reactors)	9,678	9,369	8,389	8,868
Number of positive reactors .. (no previous B.C.G.)	143	320	315	261
Percentage positive .. .. .	1.4%	3.3%	3.6%	2.8%

Of the 143 positive reactors, only 9 were strongly positive and were subsequently referred for chest x-rays with negative results. There were no cases of active tuberculosis discovered this year through these chest x-ray examinations but investigation of as many contacts as possible of the positive reactors was continued, the main purpose being to discover the source of infection responsible for the positive tuberculin reaction in the child and to offer protective measures to other members of the family if necessary. Weak positive reactions to the tuberculin test are no longer regarded as a contra-indication to B.C.G. vaccination and, therefore, the Heaf Grade 1 reactors were vaccinated.

#### SCREENING OF UGANDAN ASIANS

Arrangements were made to deal with arrivals from Uganda.

Following the procedure that children of immigrants generally should be regarded as contacts, all children below the age of 10 years were referred to the Chest Clinic for tuberculin tests. In addition, 106 children over the age of 10 years were given B.C.G. vaccination. None of the children had strongly positive reactions to the tests.

#### NATIONAL TUBERCULIN SURVEY

During the year The Medical Research Council conducted a National Tuberculin Survey to assess the present levels of tuberculous infection in schoolchildren and Staffordshire was selected as one of the 26 representative areas to participate in the Survey. In addition to 665 selected children aged 11 years and above, 570 6 year old children were tuberculin tested. The resulting data should provide valuable information on current levels of tuberculous infection both locally and nationally. The results are being processed and will eventually be available for local use in advance of the report of the whole Survey.

#### CONTACT SCHEME

B.C.G. vaccination against tuberculosis can be given to infants and other young contacts of T.B. patients and to those who are at special risk by reason of their occupation. During 1972 a total of 245 received vaccination at the Chest Clinics, the greater number of whom were child contacts of T.B. relatives. The number skin tested was 545, the number found positive 127. The number of babies vaccinated at birth was 64. Although the majority of these children are Chest Clinic patients, more often than not the numbers negative included in annual returns exceed the numbers vaccinated because a large number of children over the age of 12 months are referred to the Chest Clinics by the Paediatricians for routine Heaf testing.



# SECTION IV

## OTHER SERVICES



## FAMILY PLANNING SERVICE

Up to the 1st April, 1972 the Family Planning Association (Branches 24 and 25—Staffordshire and West Midlands) acted as the agents of this Authority for the provision of the Family Planning Service throughout the County.

In view of the national emphasis placed upon the need for the extension of the family planning services the County Council introduced a direct service on the 1st April, 1972 and since that date a policy of providing a static clinic service in all the fairly large centres of population throughout the County has been pursued. This has been most successful and it was possible to expand the total number of clinics from 10 to 15 and the number of sessions from 23 to 32 by the end of December 1972.

The County Council took over from the Family Planning Association the medical and lay staff in post at that time and also purchased from the Association the clinic equipment at an agreed sum.

The Service provides free consultation for all patients and free supplies in medical and medico-social cases.

As at December, 1972 the clinic service was available at the following:—

Biddulph, Princess Street Clinic  
Cannock, Beecroft Road Clinic  
Cheadle, Well Street Clinic  
Codsall, Elliotts Lane Clinic  
Hednesford, Eskrett Street Clinic  
Kidsgrove, Valentine Road Clinic  
Kinver, High Street Clinic  
Leek, Haregate Street Clinic  
Lichfield, Sandford Street Clinic  
Newcastle, King Street Clinic  
Rugeley, The Health Centre, Horse Fair  
Stafford, North Walls Clinic  
Tamworth, The Health Centre, Upper Gungate  
Uttoxeter, Heath House Clinic  
Wombourne, Mill Lane Clinic.

The Service is a comprehensive one and includes a full service to the unmarried, and the fitting of the intra-uterine device. Consideration is being given to the introduction of a vasectomy service, under which the County Council would sponsor certain patients who request this operation and who qualify on medical and/or social grounds.

To provide a Family Planning Service for areas where patients experience difficulty in attending clinics, due to the presence of small children, transport problems, or the patient's unwillingness to make the effort to attend a clinic at any distance, it was decided to provide a mobile service. This consists of a specially designed trailer caravan, which is towed by an ex-ambulance vehicle that doubles as the waiting room. The staff of the mobile service consists of a Medical Officer, Nurse and Driver/Attendant.

Initially, this service was introduced in the early part of 1972 as part of the urban aid programme in a part of the administrative County where it was felt that the need was greatest in view of the above average number of large families with multiple problems.

The mobile service up to December, 1972 has been well received in certain districts, but, not surprisingly, at other location points it has been less successful. It is planned to expand the programme of the mobile vehicle and develop the project, for which it is believed there is a definite need.

Prior to the introduction of the mobile service a domiciliary family planning service was in limited operation for almost two years with considerable success. However, difficulties were encountered with the domiciliary service in relation to the poor home conditions of the most needy cases, where common problems, such as lack of privacy, and dirty household conditions caused difficulties, particularly for the examination of the patient. In addition, it was found that there were a number of borderline cases who hardly justified the full domiciliary visit but who would also fail to attend a Clinic regularly. The mobile service is found to be ideal for this type of patient.

The provision of a direct family planning service has proved successful and the needs will be kept under constant review so that expansion may take place wherever appropriate.

STATISTICS FOR GENERAL SERVICE  
1ST APRIL, 1972—31ST DECEMBER, 1972

1.	Total number of individual patients seen .. ..	4,247
2.	Number of new patients .. .. .	2,788
3.	Total number of patient visits .. .. .	13,110
	(first visits —4,247	
	repeat visits —8,863)	
4.	Number of persons issued with supplies free of charge .. .. .	235

MASS RADIOGRAPHY

I am grateful to the Consultant Chest Physician of the Stoke-on-Trent Chest Radiology Centre for providing a report of his work during 1972 from which the following information has been extracted:—

“During the year 12,000 less persons were X-rayed than in 1971. The fall in numbers was entirely due to the previously planned reduction of factory surveys and elimination of public surveys by the mobile unit. The number of X-rays taken by the static unit at the Central Out-Patients’ Department in Stoke-on-Trent and those taken at the regular visits to Burton, Stafford, Leek and Uttoxeter, remained the same as in the previous year. Factory surveys are now restricted to industries with specific hazards, such as the pottery industry in North Staffordshire, foundries etc.



## TUBERCULOSIS:

The number of clinically significant cases needing treatment and/or close supervision was considerably lower than in 1971. (61 as against 100). As in previous years the highest case-finding rates were found in patients referred by General Practitioners and in immigrants from Asia. For some unknown reason considerably fewer Indians and Pakistanis were referred or attended for X-rays than in 1971. In view of the drastic curtailment of factory surveys, it becomes even more important that General Practitioners should send patients having come to this country from Asia for initial and periodical X-ray checks.

The well attended survey of people from Uganda produced only one active case of tuberculosis. The regular visits to prisons is still a necessary and productive scheme. On the other hand, the number of newly detected cases of active tuberculosis in Mental Hospitals and Geriatric Homes has been steadily falling over the past ten years.

## BRONCHOGENIC CARCINOMA:

Another tragic record has to be reported. Not less than 170 cases (149 men and 21 women) were found and the very large majority was considered to be inoperable by chest physicians and/or thoracic surgeons. The only faint ray of hope for an improvement of this calamitous situation is the fact, that the proportion of cases in young men (i.e. younger than 45 years) shows little tendency of rising but, if all groups before normal retirement age are taken together, there has been no improvement whatever since 1967. There is an increasing number of women suffering from lung cancer since 1961, a trend which is in accordance, although on a somewhat lower level, with national morbidity figures.

## INDUSTRIAL CHEST CONDITIONS:

The change of headings from "Newly detected cases of Industrial Chest Disease" to "Industrial Chest Conditions" is not accidental. At least as far as the mining industry is concerned so-called "simple pneumoconiosis" is now widely considered as a valuable biological index to dust exposure but in the large majority of cases it contributes little to disability or premature death. Whether this is also true of silicosis or mixed dust pneumoconiosis, found in the ceramic industry, is not as well established but it is hoped that the results of the 10% sample survey by members of the Medical Branch of the Factory Inspectorate—to be published this year—will shed some light on this complex problem. The figures therefore, should not cause any alarm, especially as the usage of the new "International Classification of Radiographs of Pneumoconiosis" used at this centre for the past two years provides a far wider scope for the classification of mixed dust pneumoconiosis than the International Labour Office Classification of 1958. It will be seen that only 19 of the 393 newly detected radiological changes thought to be due to mineral dust exposure were classified as Progressive Massive Fibrosis.

The visits to pottery factories had to be drastically reduced in view of the curtailment of surveys by mobile units but, as at the present time,—unlike the National Coal Board—the ceramic industry is still without its own industrial medical and radiological service—these surveys continue to render a useful service. It is also hoped that a close liaison will be established between the Chest Radiology Service and the newly established Employment Medical Advisory Service of the Ministry of Employment.



In 1971/72 I was privileged to act as one of three assessors of almost 8,000 full-sized films taken for the above mentioned survey by the Medical Branch of the Factory Inspectorate and to become a member of the "National Advisory Panel on Survey Radiology". These activities have somewhat painfully reminded me that the problem of Intra—and Inter-observer errors in the assessment of radiographs is still very much with us.

Perhaps the most interesting case of "industrial dust disease" was that of a young man who developed Farmer's Lung at the age of 11 years whilst helping on a farm during school holidays.

#### OTHER CONDITIONS:

The follow-up of non-tuberculous inflammatory conditions has over the years become a significant part of the work of both units and is very much appreciated by General Practitioners and their patients. There has been a steady rise in the findings of sarcoidosis and spontaneous pneumothorax."

### INFECTIOUS DISEASES

The following statistical table relates to the notifiable infectious diseases and the deaths from the diseases among the home population during 1972.

Diseases	Notifications		Deaths	
	Urban	Rural	Urban	Rural
Measles (excluding Rubella) .. ..	1,811	969	—	—
Dysentery .. .. .	16	14	1	—
Scarlet Fever .. .. .	133	34	—	—
Diphtheria .. .. .	—	—	—	—
Acute Meningitis .. .. .	15	1	5	2
Ac. Poliomyelitis — Paralytic .. ..	—	—	—	—
— Non-Paralytic .. ..	—	—	—	—
Smallpox .. .. .	—	—	—	—
Ophthalmia Neonatorum .. .. .	9	1	—	—
Anthrax .. .. .	—	—	—	—
Yellow Fever .. .. .	—	—	—	—
Ac. Encephalitis — Infective .. ..	—	—	—	—
— Post-Infectious .. ..	—	—	—	—
Lepto-spirosis .. .. .	—	—	—	—
Paratyphoid Fever .. .. .	—	—	—	—
Typhoid Fever .. .. .	—	—	—	—
Food Poisoning .. .. .	34	21	—	—
Malaria .. .. .	1	—	—	—
Whooping Cough .. .. .	9	14	—	—
Tetanus .. .. .	—	—	—	—
Infective Jaundice .. .. .	27	15	—	—
Tuberculosis — Respiratory .. ..	33	15	2	3
— Meninges and C.N.S. ...	—	3	—	—
— Other .. .. .	6	2	1	2
— Cases of T.B. not notified before death .. ..	2	1	—	—

## VENEREAL DISEASES

During the year there were 1,787 new cases in Staffordshire compared with 1,851 in 1971.

TREATMENT CENTRE	Syphilis	Gonorrhoea	Other Venereal Conditions	Total New Cases
Birmingham General Hospital .. .. .	1	60	183	244
Burton-on-Trent General Hospital .. .. .	1	4	30	35
Dudley Guest Hospital .. .. .	—	—	3	3
Stafford (Staffordshire General Infirmary) .. .. .	5	92	215	312
Stoke-on-Trent (Wellesley Street) .. .. .	6	1 3	444	563
Walsall (Manor Hospital) .. .. .	2	65	350	417
Wolverhampton Royal Hospital .. .. .	3	45	165	213
TOTALS .. .. .	18	379	1,390	1,787

For comparative purposes the totals of the cases included in the foregoing table for the last thirty-five years have been extracted and are given below:—

Year	Syphilis	Soft Chancre	Gonorrhoea	Total Cases	Other Venereal
1937 .. .. .	116	5	320	441	326
1938 .. .. .	133	3	302	438	344
1939 .. .. .	116	5	283	404	310
1940 .. .. .	126	1	244	371	348
1941 .. .. .	111	1	267	379	359
1942 .. .. .	134	2	266	402	512
1943 .. .. .	163	2	271	436	783
1944 .. .. .	171	2	273	446	791
1945 .. .. .	186	—	355	541	867
1946 .. .. .	275	2	451	728	1,180
1947 .. .. .	147	2	254	403	682
1948 .. .. .	177	4	219	400	904
1949 .. .. .	148	—	234	382	842
1950 .. .. .	85	—	178	263	824
1951 .. .. .	67	—	163	230	760
1952 .. .. .	54	—	136	190	666
1953 .. .. .	64	—	158	222	698
1954 .. .. .	51	—	109	160	707
1955 .. .. .	39	—	105	144	562
1956 .. .. .	46	—	117	163	531
1957 .. .. .	43	—	163	206	700
1958 .. .. .	43	—	148	191	650
1959 .. .. .	37	—	142	179	797
1960 .. .. .	28	—	121	149	960
1961 .. .. .	32	—	155	187	920
1962 .. .. .	29	—	194	223	978
1963 .. .. .	43	—	213	256	981
1964 .. .. .	34	—	227	261	1,042
1965 .. .. .	29	—	322	351	1,183
1966 .. .. .	28	—	261	289	1,113
1967 .. .. .	22	—	238	260	1,042
1968 .. .. .	19	—	220	239	1,113
1969 .. .. .	13	—	281	294	1,165
1970 .. .. .	9	—	292	301	1,100
1971 .. .. .	23	—	379	402	1,449
1972 .. .. .	18	—	379	397	1,390

## CONTROL OF VENEREAL DISEASE

A liaison Health Visitor has been appointed to assist the Venereologist at the Staffordshire General Infirmary and discussion has taken place concerning a similar liaison with the North Staffs. Hospital. This has been deferred for a while due to lack of accommodation at the Hospital. However, nursing staff continue to act as contact tracers whenever requests for this service are made.

### CURRENT RESEARCH

#### 1. FOETAL MORBIDITY AND MORTALITY

A study has been made of a possible correlation between virus infection in pregnancy and spontaneous abortion or malformation of the offspring. This has entailed investigation of women aborting spontaneously and of a comparable group of continuing pregnancies with virological studies and examination of the products of conception and live born infants respectively. The results are not yet available.

The investigation has been dependent on the co-operation of the Directors of the Staffordshire and Manchester Public Health Laboratories, local Consultant Gynaecologists, Doctors, Midwives and Health Visitors, and this is gratefully acknowledged.

#### 2. THE INCIDENCE OF SUB-CLINICAL RICKETS

Reports of blood changes in immigrant and other children in the United Kingdom suggestive of an early form of rickets prompted a series of investigations in the County to establish whether this was a local problem and to enquire into factors of possible significance.

The studies are continuing and results will be published in due course.

#### 3. OXFORD SURVEY OF CHILDHOOD CANCERS

The Department has continued to co-operate with the above survey. Medical Officers visit the parents of the deceased child to prepare a detailed report and also visit parents of a healthy child of the same age for comparative purposes.

The survey began in 1956 following discussions Dr. Alice Stewart, Reader in Social Medicine in the University of Oxford, had with Medical Officers of Health. Retrospective collection of information on all children in England, Wales and Scotland under the age of 10 years, who had died during the previous three years from leukaemia or cancer, formed the basis of the Survey. Subsequently, the study was extended in stages to include all children dying from leukaemia or of neoplastic conditions who had at the time of death not obtained their 16th (0-15 years) birthdays respectively.

The following table as supplied by the Oxford Survey for Staffordshire for the years 1953-1971 gives information of group diagnosis and age at death:—



Group	Diagnosis and age Deaths 1953-71, Region—Staffordshire			
	<i>Age at Death</i>			
	0-4	5-9	10-14	15
Leukaemia .. .. .	61	57	23	3
Tumours of Central Nervous System .. .	26	14	5	2
Neuroblastoma .. .. .	13	6	2	0
Wilm's Tumour .. .. .	11	4	2	0
Bone Tumours .. .. .	0	3	4	1
Reticulosis .. .. .	12	9	6	0
Other Malignant Conditions .. .. .	16	5	6	1
Benign and Unspecified Neoplasms .. ..	6	2	2	0
Total .. .. .	145	100	50	7

#### 4. NATIONAL TUBERCULIN SURVEY

Reference to this important investigation in which the Department participated is made elsewhere in the report

# **REPORT OF THE COUNTY HEALTH INSPECTION SECTION**

## **INTRODUCTION**

Set out in the following pages are the results of this Section's routine duties which differ only in minor detail from previous years.

Schemes of Water Supply, Sewerage and Sewage Disposal continued to be put forward by the various District Councils for grant purposes, stimulated perhaps in some cases by a belief that if the schemes were not approved prior to the takeover of sewerage and water functions by the new River Authorities, (envisaged by the Local Government reorganisation and taking effect from 1st April, 1974) there was a possibility that the need for such schemes may not be considered so urgent by the new Water Authorities as by the District Council concerned.

Not set out in the Report are the many day to day problems which arise usually coming "out of the blue" and with no precedent for guidance. Matters such as dealing with a telephone call received late on a Friday night to the effect that some 20,000 gallons of milk at a large processing dairy were suspected of being contaminated with Anthrax and "please what are we to do about it?"; a consignment of fish fillets being marked with peculiar yellow lines delivered to a School Canteen and "please can we use it for dinner tomorrow?"; a school swimming pool the water of which turned black overnight (the cause of this was never ascertained but sabotage was strongly suspected) and another school pool which turned bright green overnight.

Co-operation with District Councils and all other County Council Departments continued in its usual quiet and efficient way. There is not one department of the County Council which, in one way or another, is not affected by this sections interests or which at some time or other does not seek advice, guidance or information therefrom.

Not only do the County Council Departments make full use of the section but likewise many members of the public with complaints ranging from rats at the bottom of the garden to allegations of delay or failure to deal effectively with complaints by District Health Departments. The latter, after due investigation, happily, can rarely be substantiated.

## **SCHEMES OF WATER SUPPLY, SEWERAGE AND SEWAGE DISPOSAL**

For the financial year 1972-73 a sum of £413,855 made up of £320,440 under the Local Government Act, 1958, and £93,415 under the Rural Water Supplies and Sewerage Acts was contributed by the County Council to District Councils towards the cost of water supply, sewerage and sewage disposal schemes.

During the year two water supply schemes estimated to cost £7,282 and 16 sewerage and sewage disposal schemes estimated to cost £2,915,430 were submitted to the County Council for grant purposes and were considered by the Health Committee.

Details of schemes of water supply, sewerage and sewage disposal considered during 1972 for grants under the Rural Water Supplies and Sewerage Acts, 1944-65, and/or Section 56 of the Local Government Act, 1958:—

#### SCHEMES OF WATER SUPPLY

##### LICHFIELD RURAL DISTRICT

###### *Hill Top, Longdon*

This scheme estimated to cost £2,600 towards which contributions of £120 have been offered by the recipients of the water supply, is to provide mains water to six properties at present served by a spring. The spring supply is now inadequate and samples taken by the Lichfield Rural District Council's Health Department have proved unsatisfactory, being contaminated to such an extent as to render the supply unfit for drinking purposes.

The scheme was recommended for approval.

##### UTTOXETER RURAL DISTRICT

###### *Marchington Cliff*

This scheme, estimated to cost £4,682, is to provide a mains water supply to six properties in the Marchington Cliff area.

The existing properties are supplied by shallow wells or springs the supply from which are bacteriologically unsatisfactory. Furthermore, the absence of a mains supply is holding up improvement to a number of the properties and difficulties are being caused at a farm which is included in the six.

In recommending the scheme for approval it was suggested the Rural District Council should be asked to reconsider the case of the property referred to as No. 2. Under the present proposals the end of the main will be some 700 feet away from this particular cottage. It was felt the main should be extended to a point opposite the cottage.

#### SCHEMES OF SEWERAGE AND SEWAGE DISPOSAL

##### CANNOCK RURAL DISTRICT

###### *Hilton Lane Sewerage Scheme, Shareshill*

This scheme, estimated to cost £7,801 towards which a contribution of £1,000 is to be made, provides a length of sewer for six properties and one convent in the Hilton Lane area. Six of the properties have either septic tanks or pan closets and the convent has a small sewage disposal works which is not operating satisfactorily and is alleged to be causing considerable pollution in adjoining streams.



Agreement having been reached between the R.D.C. and the County Health Department that the sewer from manhole 9 to manhole 10 and the provision of manhole 10 was unnecessary and could be deleted from the scheme with some consequent saving in cost, and the scheme was recommended for approval.

#### *Weston-under-Lizard and Blymhill Sewerage and Sewage Disposal Scheme*

This scheme estimated to cost £235,000 is a comprehensive sewerage and sewage disposal scheme covering the villages and hamlets of Weston-under-Lizard, Blymhill Lawn, Blymhill Village, Blymhill Marsh, Brineton, Great Chatwell, Beighterton and Blymhill Common in the Cannock Rural District, together with some properties at Merry Hill and Gorsey Bank in the Shifnal Rural District area for which the Shifnal Rural District Council will make payment.

No agreement, at the present time, has been entered into between the Shifnal and Cannock Rural District Councils regarding the communication (as between Districts) of the sewers but appropriate action is being taken to regularise the position.

The scheme deals with some 190 houses, 18 farms and 10 other properties, serving a total population of 1,035. The population figure covers the existing population together with estimated future increases. Five pumping stations are involved in the scheme which covers a scattered agricultural area and this naturally makes the overall cost fairly high.

The scheme is based on the principle of dealing with foul water only, i.e. excluding surface and rain water with the exception of a section of the Weston-under-Lizard area where use is being made of existing sewers which already have surface water connections. The Rural District Council are confident they can enforce the exclusion of surface water connections to the proposed new sewerage system but the Department has some reservations on this point. The treatment works consist of two pre-fabricated activated sludge type tanks to be followed by upward flow clarification tank treatment.

There is no doubt considerable pollution of ditches and water courses taking place due to the absence of proper drainage facilities in the area concerned, or the ineffective treatment being given where sewage disposal works are already provided.

The scheme was recommended for approval subject to the attention of the Cannock Rural District Council being called to the distinct possibility that their confidence to exclude surface water connections may not in fact be supported in practice and that complications with the final treatment works may arise as a result.

#### CHEADLE RURAL DISTRICT

##### *Blythe Valley Sewerage Disposal Works Extensions No. 2*

This scheme, estimated to cost £162,030 in 1969, is to provide further extensions (Stage 2) to the Blythe Valley Works. The extensions comprise primary sedimentation tanks, primary and secondary humus tanks, digestion tank including gas dome collecting equipment, sludge drying beds, mains, manholes, extensions to office and additional electrical works with associated meters and machinery.

The proposed extensions will deal with a population of 78,000 which is the projected population for 1985 of the area served by the disposal works.

The estimated capital cost of £162,030 is the figure quoted on form K.29 which was submitted in September 1969. The scheme is being carried out by Stoke-on-Trent City Council and only a portion of the capital cost falls to be met by the Cheadle Rural District. It is understood, however, that the current estimate of the total capital cost is £183,500. The scheme has in fact been in progress for some time and is practically completed.

The scheme was recommended for approval.

#### *Hollington Sewerage Scheme*

This scheme estimated to cost £120,000 is to provide sewerage facilities for the village of Hollington and properties in the vicinity of Fole, as well as taking the effluent from the C.W.S. Fole Dairy which at present has its own treatment plant. The Co-operative Wholesale Society have verbally offered £5,500 as a contribution towards the capital cost of the scheme in respect of effluent from their Dairy.

The cost of the scheme is high due to the scattered nature of the properties at Hollington in relation to the length of sewers required. Furthermore, pumping together with the rising mains, adds to the cost.

If these areas are to be sewered at all the cost is inevitably going to be high and the scheme was recommended for approval.

#### LICHFIELD RURAL DISTRICT

##### *Whittington Sewerage and Sewage Disposal Scheme*

##### *Fisherwick Road Extension*

This scheme which deals with four properties on the Fisherwick Road is in fact substantially the same as that which was recommended by the Department in 1963 to replace a more expensive scheme which the District Council had in mind to serve Fisherwick and Hademore.

The capital cost of the scheme is £1,756 and it was recommended for approval.

#### NEWCASTLE-UNDER-LYME RURAL DISTRICT

##### *Woore/Knighton Sewerage and Sewage Disposal Scheme*

This scheme, a joint scheme by the Market Drayton and Newcastle Rural District Councils provides for sewerage and sewage disposal in the Market Drayton Rural District the sewers of which will pass through the Newcastle Rural District in the vicinity of Knighton. Advantage has been taken of this to provide connecting sewers from the Knighton area to the trunk sewers leading to the Disposal Works.

The total cost of the scheme is £405,000 and the apportionment of the cost as agreed between the two authorities is £341,000 to the Market Drayton Rural District Council and £64,000 to Newcastle Rural District Council.

The scheme was recommended for approval.



## STAFFORD RURAL DISTRICT

### *Moreton Village Sewerage Scheme*

This scheme, estimated to cost £61,600 provides for a main sewer, manholes, sewer connections, pumping station, rising main and hatch box and air valve chambers for the sewage of the village of Moreton. The sewage will be pumped to the new Gnosall Works for treatment. There is no doubt a need for the scheme, principally due to nuisance arising from the discharge of sewage into ditches.

Following discussions and agreement with the Technical Officers of the Rural District Council, the original scheme has been amended by extending a sewer to deal with five more properties and confirmation has now been received of a further suggestion that proper provision be provided for the ventilation of the pump well to the pumping station and an assurance that a connection will be provided for properties north-east of MH 20 on Heath Road.

The scheme was recommended for approval.

## TUTBURY RURAL DISTRICT

### *Anslow Sewerage Scheme*

This scheme, estimated to cost £65,000 is to provide for the sewerage of Anslow, an area which, at present, has no public sewer.

In 1967 a scheme was put forward which included the sewerage of this area but it was subsequently deferred by the then Ministry of Housing and Local Government because of the need to curtail public expenditure at the time.

There is no doubt a need for the scheme since untreated or partially treated sewage is finding its way into streams and ditches and pollution is arising at various places. Some 10 properties in the area served by the proposed scheme would be suitable for improvement with grant aid if satisfactory drainage facilities were available. Some 53 properties are involved on the line of the proposed sewer including eight from houses, one public house, one village hall, one school and one mission hall.

A recommendation that the sewer be extended from M.H.174 to enable easier connections to be made to the sewer for two other properties has been accepted by the Rural District Council and with this amendment the scheme was recommended for approval.

## TUTBURY RURAL DISTRICT

### *Barton-under-Needwood, Tatenhill and Rangemore Sewerage and Sewage Disposal Scheme*

This scheme, estimated to cost, £296,000 is to provide for:—

- (a) extensions at the Barton-under-Needwood Treatment Works.
- (b) sludge pressing equipment which will deal with sludge from the Rolleston and Yoxall treatment works as well as with the sludge from the Barton works, and
- (c) the provision of sewers to the Rangemore and Tatenhill villages.



Some 63 properties are capable of being served, of which 32 are served by septic tanks with varying standards of efficiency, 9 other properties have catchpits with overflows discharging to water courses at various points. Twenty-three of the properties have pail closets. Some 18 properties would be regarded as suitable for improvement with the assistance of improvement grants if satisfactory drainage facilities are provided.

Pollution of water courses occurs at various points sufficient to be classed as a public health nuisance and there is no doubt a need for the scheme from a public health point of view.

Subject to the suggestion that the Rural District Council should make provision by means of a rider sewer for two properties south of the sewer between manholes 8 and 9, the scheme was recommended for approval.

#### LEEK URBAN DISTRICT

##### *Westwood Sewerage Scheme*

This scheme, estimated to cost £177,500, is to provide foul and surface water sewers varying in diameter from 6 in. to 42 in. together with manholes and a storm overflow chamber to relieve the existing inadequate sewerage system in the Westwood area of the Leek Urban District Council.

Parts of the older sections of Westwood particularly in the North Street area and in the valley between the main foul sewer and Westwood Health Road, are surcharged in times of storm and the manhole covers are forced off.

The scheme was recommended for approval.

#### STAFFORD BOROUGH

##### *Brancote Sewage Disposal Works—Phase II Extensions*

This scheme the estimated capital cost of which is £811,250 is to extend the Brancote Gorse Sewage Disposal Works to cater for an additional population of 20,000. The recently completed extensions (Stage I) were designed to deal with a dry weather flow of 3.68 million gallons from a population of 67,200.

The proposed works include detritus channels, inlet works, two sediment tanks, two humus tanks, new filter beds and extensions to existing beds, conversion of existing secondary digester to primary including additional boiler and heat exchangers, new pumping station complete with effluent return and humus pumps, two additional sludge filter presses and miscellaneous site works.

The scheme was recommended for approval.

#### TAMWORTH BOROUGH

##### *Tamworth Town Expansion Drainage of the Amington Industrial Estate*

This scheme, estimated to cost £72,033, is to provide for some 1,600m of foul water outfall sewer varying in diameter from 375mm. to 675mm. and for the construction of a surface water outfall sewer of which 370m. is

pipied varying from 525mm. to 900mm. diameter and 1,600m. is an existing water course which will be regraded. The sewers will provide connections to the main Amington trunk foul water outfall sewer and for the Kettlebrook stream in the case of the surface water outfall sewer.

The scheme was recommended for approval.

#### *Tamworth Town Expansion—Coton Lane Sewage Disposal Works PHASE II*

This scheme estimated to cost £608,670 forms Phase II of the extensions to the Borough Council Sewage Treatment Works and associated pumping stations. Phase I, the design of which was initiated in 1966, provided for a population of 46,500 but certain rising mains, pumping equipment etc., were designed for an ultimate population of 97,011.

The first phase of Coton Lane Disposal Works, Lichfield Road Pumping Station and Stormwater Tanks were designed to treat the domestic and trade flow for a population of 46,500. This population figure had already been reached and by the contract completion date the works will be overloaded to the extent of flow from a population of 3,000 and, within a further year to the extent of that from approximately 7,000. Over the following four years, the planned rate of development is such that the population of the Borough together with that from the associated parts of Lichfield and Atherstone Rural Districts (assuming these to be static) will reach approximately 70,000 equivalent to roughly a 50 per cent overload.

In view of the circumstances outlined above it is imperative that immediate consideration should be given to the planned extension of these Works which will be overloaded on or before the date of commissioning.

The proposed extensions include two sedimentation tanks, four bacteria beds, two humus tanks, a sewage pumping set and comminutor, together with associated pumping stations, pipe work, roads and paths, etc., and is designed to deal with a flow of 6,071,640 gallons per day from an ultimate population of 97,011, compared with the present flow of 3,000,000 gallons.

The scheme was recommended for approval.

#### *Tamworth Town Expansion—Area No. 7(Glascote) Provision of Sewers*

This scheme was completed some three years ago, the capital cost being £12,120, comprises 250 and 300 metres of 24 in. and 12 in. storm and foul sewers and manholes making the connections between the No. 7 residential area and the main trunk foul sewer in the case of the foul water sewer and the Kettlebrook in the case of the surface water sewer.

It is an extension of part of the Area No. 7 (Glascote) scheme which was considered and approved by the County Council at their meeting on the 27th November, 1971.

The scheme was recommended for approval.

#### *Tamworth Borough—Kettlebrook Valley Foul Water Sewer—Stage 5*

This scheme estimated to cost £47,200 is a further extension of the Kettlebrook Valley foul intercepting sewer, Stage 4 of which was constructed in 1969. The scheme provides for the disposal of foul water for



the proposed residential development of R.U.9 on the approved Town Map. The development of the area is anticipated to commence in Spring 1973.

The existing foul water sewer from Shelton Street to Kettlebrook Park is of insufficient capacity to accommodate any additional flow and some adjustment to the line of the sewer is necessary to comply with the proposed extensions to Kettlebrook Park. The proposed new sewer is also designed to cater for foul water from the rest of the catchment area if and when developed.

Subject to further discussion on the proposed line of the sewer the scheme was recommended for approval.

UTTOXETER URBAN DISTRICT  
*Balance Hill Sewerage Scheme*

This scheme, estimated to cost £152,000, is to provide foul and surface water sewers for the first stage of development of the Balance Hill area. The first stage relates to development for which permission has already been granted. The area covered by the whole scheme is broadly bounded by the Railway Line, Stafford Road, Cullamore Lane and Highwood Road.

Subject to the scheme being amended if the full development envisaged by the Urban District Council does not in fact take place (so leading to possible reductions in the size of sewers with a saving in the final cost) the scheme was recommended for approval.

**DEPARTMENT OF ENVIRONMENT INQUIRIES**

During the year the following Inquiries were held:—

6.1.72	Stafford Borough Council	) —	Extensions to the Sew-
		)	age Disposal Works
10.1.72.	Cannock Rural District	) —	Extensions to Wheaton
		)	Aston Treatment
		)	Works and the Sewer-
		)	age of Lapley.

The County Health Department was represented by the County Health Inspector, who accompanied the Department's Inspector on his subsequent visits to the areas concerned.

The Section is also concerned with the periodic inspection of local authority sewage disposal works after completion and final effluent samples are taken from time to time as a further assurance of good maintenance standards which is a condition of the continued payment of County Council grant aid.

In addition to local authority sewage disposal schemes the Section is also involved with the provision and supervision of school and other institutional small scale installations. These plants are also periodically inspected and sampled in liaison with the County Architect's Department in an attempt to ensure that proper standards are maintained.



## **SCHOOL WATER SUPPLIES**

The Section is also concerned with the purity of water supplies to schools, etc., in rural areas where no public mains supply is available. The number of such schools has tended to decrease over the years as a result of the extension of mains supplies to rural communities and, of course, the closure of some of the smaller and more remote schools for economic and educational reasons. In 1964 there were 15 schools which were supplied with non-public mains water whereas in 1971 there were only 6. The number of samples, both bacteriological and chemical, taken as precautionary checks against contamination and/or efficiency of sterilisation measures, was correspondingly reduced from a total of 73 in 1964 to 25 in 1972, 4 chemical samples are included in the 1972 figure of 25.

## **SCHOOL SWIMMING POOLS**

Another important responsibility of the Section is the supervision of the hygienic operation of school swimming pools. There has over recent years, been a steady increase in the number of pools, which has inevitably resulted in greater demands in time being devoted to this particular work. All the pools were inspected at least once a term as a matter of routine and field tests conducted on site to check the chlorine and pH content of the water. Advice on the operation of pools was given to caretakers as and when necessary and special attention was given to new pools or in cases where difficulties were experienced. Happily, the standards maintained generally throughout the County pools are of the highest order and they reflect credit on the Caretakers who are responsible for their day to day operation.

Problems do arise from time to time, usually associated with mechanical defects to the filtration, sterilisation or circulation equipment, but in most cases these are remedied without undue delay, through the good offices of the County Architect's Department. Rarely are pools out of action for more than a few days at a time.

All County owned school pools are now heated and provided with automatic chlorination equipment. At the end of 1972 there were 15 enclosed pools, 13 open-air pools and in addition use was made of 4 private pools by special arrangement.

## **FLUORIDATION OF WATER SUPPLIES**

There has been no progress to report in the fluoridation of water supplies in the County. Only a very small number of properties in the Seisdon Area taking a supply from Birmingham have water so treated.

## **MILK SUPPLY**

### **MILK SAMPLING**

The work of the Department in endeavouring to ensure a clean, wholesome and disease-free milk supply throughout the County was maintained.

The Department continued to undertake the sampling of “street” or retail milk throughout that part of the County area for which the County Council is the Food and Drugs Authority. These samples of milk are subject to appropriate statutory tests as follows:—

*Untreated* milks are examined for cleanliness (the Methylene Blue Test) and also for the presence of tubercle bacilli and Brucella organisms.

*Pasteurised* milks are also subjected to the Methylene Blue Test and in addition are checked for the efficiency of the pasteurisation process (the Phosphatase Test).

*Sterilised* milks are examined for the efficiency of heat processing (the Turbidity Test).

*Ultra Heat Treated* milks must comply with the Colony Count Test. Details of these samples appear in Table I.

## LEGISLATION

The principal legislation relating to milk are The Milk and Dairies (General) Regulations, 1959, and the Milk (Special Designation) Regulations, 1963, and in accordance with the requirements of these statutes, the following licences were in force at the year end within the County:

### MILK PASTEURISING AND STERILISING PLANTS

- 1 Firm held a Dealer's (Pasteuriser's) and a Dealer's (Steriliser's) Licence;
- 2 Firms held Dealers' (Pasteurisers') Licences.

All these plants were visited regularly and the premises and plant inspected. In addition to the collection of routine milk samples therefrom, samples of washed bottles were taken from two of the dairies, the third supplied milk only in churns and cartons.

### MILK DEALERS' LICENCES

The number of licences in operation during the year was:—

Dealers' (Pre-packed Milk) Licences	..	752
Dealers' (Untreated Milk) Licences	.. ..	2

## BIOLOGICAL TESTING

The Department continued to undertake the collection of retail untreated milk samples for biological examination. Unsatisfactory sample results were notified to the District Councils concerned, for appropriate action.

Biological tests for tubercle bacilli are still conducted on samples of untreated milk although it is some years since any positive evidence of infection was reported. Regular biological examinations of untreated milk for the presence of Brucella infection, now a more significant and widely publicised disease of the two, continued throughout the year.



As a result of the Ministry of Health Circular 17/66 issued in late October of 1966, herd samples of all milk which is sold for retail consumption as 'Untreated Milk' continues to be taken at monthly intervals.

Details of samples submitted for the presence of Brucella organisms and tubercle bacilli are given in Table II.

INFORMAL FOOD AND DRUGS SAMPLING

The Department continued to undertake, as an administrative convenience, the routine sampling of milk from retail sources and from schools and school canteens, institutions, etc., for informal examination under the Food and Drugs Act. These samples were examined for the percentage of fat and solids-not-fat and for the presence of added water, the results being notified to the County Chief Inspector of Weights and Measures.

Details of these samples, from all sources, are as follows:-

Untreated	..	212	(4 unsatisfactory —deficient in fat)
Untreated	..	35	(3 unsatisfactory —deficient in fat)
(Channel Island)			
Pasteurised	..	454	(2 unsatisfactory —contained added water)
Pasteurised	..	34	
(Channel Island)			
Sterilised	..	26	
Ultra Heat Treated		25	
Total	..	786	(9 unsatisfactory)

These nine unsatisfactory informal samples were followed-up by the County Chief Inspector of Weights and Measures, who reported as follows:—

<i>Designation</i>	<i>Results of Repeat Samples and action taken</i>
Untreated Milk (4)	1 Deficient in fat—  Repeat samples Genuine.  1 Genuine  1 Deficient in fat—Proved by 'Appeal to Cow' samples to be naturally poor. 1 Deficient in fat—'Appeal to Cow' samples 'Genuine'.
Untreated Channel Island (3)	3 Genuine
Pasteurised (2)	2 Genuine.



## HYPOCHLORITES IN MILK

Samples of milk continued to be examined for the presence of hypochlorites (chemical agents used in the sterilisation of bottles, churns, dairy plants, etc.).

Details are as follows:—

Untreated	..	..	..	89
Untreated Channel Island	..			16
Pasteurised	..	..	..	206
Pasteurised Channel Island	..			15
Sterilised	..	..	..	26
Total				352 (all satisfactory)

## ANTIBIOTICS IN MILK

The routine sampling of milk supplies to determine the presence of antibiotics, commenced in late 1965, continued throughout the year. During 1972 there were 215 samples examined, 2 of which were reported as 'positive'.

## MILK IN SCHOOLS SCHEME

All supplies to schools are subject to the approval of the Department and during the year all but one school were supplied with heat treated milk. A number of the more remote schools in the north of the County continued to be supplied on a fortnightly basis with 'long life' Ultra Heat Treated milk and no problems were encountered.

## SCHOOL MILK COMPLAINTS

The reduction in recent years of the amount of milk supplied in absolute terms has been reflected in the reduced number of complaints.

During the year there were 2 instances reported which involved the discovery of 'foreign bodies' in bottles and 5 cases of glass being found. These incidents were investigated and the matters pursued with the dairies concerned. No legal action was taken during the year against suppliers or processers due in part to the previously satisfactory record of the offenders and partly because of the inconclusiveness of the evidence.

There was only one reported case of sour milk having been supplied to a school and there were no complaints involving leaking cartons.

Several complaints were made concerning the presence of glass in the bottom of crates and of crates themselves being in a dirty condition. These mainly related to one dairy and after the matter had been drawn to the Manager's attention no further incidents were reported.

The one continuing problem is that of damaged bottles of milk being supplied to schools which does present a potential hazard. There is no single means of entirely eliminating this risk whilst glass bottles continue in use and reliance has to be placed upon exhortations to suppliers to exercise more care in handling and upon the maintenance of constant vigilance within the schools.

GENERAL

In addition to samples taken under the foregoing heads, samples of milk were also taken during the year from S.C.C. School Canteens, Hospitals, Children s Homes, Day Nurseries, Play Groups, and certain Private Schools and Colleges, and were subjected to the same tests as other supplies.

Details of these samples appear in Table IV.

SUMMARY

The following is a summary of routine samples collected by the Department during the year:—

Street/Retail Milks	..	..	..	2,811
Schools	..	..	..	446
School Canteens	..	..	..	32
Hospitals, Homes, etc.	..	..		365
“Food and Drugs” (Milk)	..	..		786
“Hypochlorites”	..	..	..	352
“Antibiotics”	..	..	..	215
Ring Test only	..	..	..	73*
Bottle Rinsings	..	..	..	324
Total				5,404

\*This figure of 73 is included in the total of 1,181 in Table II.

TABLE I  
Summary of Street or Retail Milk Samples Collected (i.e. excluding Samples from Schools, Institutions, etc.)

TYPE OF MILK	Total Samples Taken	Methylene Blue Test (for Cleanliness)					Phosphatase Test (for correct Pasteurisation)		Turbidity Test (Sterilised Milk)		Colony Count Test (U.H.T. Milk)	
		Samples Void	Samples Examined	Result	% 1972	% 1971	Samples Examined	Result	Samples Examined	Result	Samples Examined	Result
Untreated ..	1,050	25	1,025	Passed 889 Failed 136	86.7	93.8	—	—	—	—	—	—
Pasteurised . *(Includes 105 for Phosphatase Test only).	1,841*	—	1,736	Passed 1,638	94.4	96.9	1,841 % Satis.	Passed 1,840 Failed 1 1972 99.9 1971 99.8	—	—	—	—
Sterilised ..	33	—	—	—	—	—	—	—	33	Passed	—	—
Ultra Heat Treated	44	—	—	—	—	—	—	—	—	—	44	Passed
TOTALS ..	2,968	25	2,761	Passed 2,527 Failed 234	91.5	95.5						

Unsatisfactory samples of Pasteurised milk processed at dairies licensed by the County Council are investigated by the County Health Inspectors for both Methylene Blue and Phosphatase test failures. Where the dairy is not licensed by the County Council, samples which fail the tests are reported to the Medical Officer of Health of the licensing authority concerned, for appropriate action.



TABLE II

Table of Biological Results

Brucella abortus

Untreated Milk	Total Samples Examined	Ring Test POSITIVE	Direct Culture POSITIVE	Biological Test POSITIVE
Street Milk/Retail .. ..	1,112	19*	Nil	2
Schools .. ..	8	Nil	Nil	Nil
School Canteens .. ..	25	Nil	Nil	Nil
Private Schools, Colleges, and S.C.C. Premises } .. ..				
TOTALS .. ..	1,181	19	Nil	2

\*Of the 19 Retail Milks reported Ring Test POSITIVE, 1 was from the herd of a Producer outside the County.

TUBERCLE BACILLI 17 samples were examined—all were Negative.

TABLE III  
**Summary of School Milk Samples**  
*1st January — 31st December, 1972*

TYPE OF MILK	Total Samples Taken	Methylene Blue Test (For Cleanliness)					Phosphatase Test (For correct Pasteurisation)		Colony Count Test (U.H.T. Milk)	
		Samples Void	Samples Examined	Result	% 1972	% 1971	Samples Examined	Result	Samples Examined	Result
Untreated .. ..	7	—	7	Passed	7	100	—	—	—	—
Pasteurised .. .. *(Includes 60 for Phosphatase Test only).	503*	—	443	Passed 427 Failed 16	96.4	97.2	503 % Satis.	Passed 500 Failed 3 1972 99.4 1971 100	—	—
Ultra Heat Treated ..	10	—	—	—	—	—	—	—	10	Passed
TOTALS .. ..	520	—	450	Passed 434 Failed 16	96.4	97.2				

Unsatisfactory samples of Pasteurised milk processed at dairies licensed by the County Council are investigated by the County Health Inspectors for both Methylene Blue and Phosphatase test failures. Where the dairy is not licensed by the County Council, samples which fail the tests are reported to the Medical Officer of Health of the licensing authority concerned, for appropriate action.

TABLE IV  
Summary of Milk Samples from School Canteens, Hospitals, Homes, S.C.C. Premises,  
Private Schools, Play Groups, etc.  
1st January — 31st December, 1972

TYPE OF MILK	Total Samples Taken	Methylene Blue Test (for Cleanliness)				Phosphatase Test (for correct Pasteurisation)	
		Samples Void	Samples Examined	Result	% 1972	% 1971	Samples Examined      Result
Untreated    ..    ..    ..    ..    ..	42	1	41	Passed 40 Failed 1	97.6	97.9	—                      —
Pasteurised    ..    ..    ..    ..    .. *(Includes 37 samples for Phosphatase Test only)	388*	—	351	Passed 340 Failed 11	96.9	98.0	388      Passed 388 Failed Nil % Satis.      1972 100 1971 100
TOTALS    ..    ..    ..    ..    ..	430	1	392	Passed 380 Failed 12	96.9	97.9	

Unsatisfactory samples of Pasteurised Milk processed at dairies licensed by the County Council are investigated by the County Health Inspectors for both Methylene Blue and Phosphatase failures. Where the dairy is not licensed by the County Council, samples which fail the tests are reported to the Medical Officer of Health of the licensing authority concerned, for appropriate action.





# STAFFORDSHIRE COUNTY COUNCIL

## HEALTH COMMITTEE

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# Annual Report of the County Analyst for the year 1972

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### INTRODUCTION

The total number of samples, from all sources, was 7,775, of which 5,294 or 68.1 % were from County Council sources, 1,466 or 18.8 % were from the four other Autonomous Authorities for which I hold appointments as Public Analyst, and 1,015 or 13.1 % were from other sources, including 18 other Borough or District Councils within the borders of the Administrative County of Staffordshire.

In order to facilitate reference to these samples in this Report, they are grouped under Sections, as follows:—

- Section I*      Number of samples and their origin
- Section II*     Food and Drugs Act, 1955
- Section III*    Fertiliser and Feeding Stuffs Act, 1926
- Section IV*     Consumer Protection Act, 1961
- Section V*      Pharmacy and Poisons Act, 1933
- Section VI*     Trade Descriptions Act, 1968
- Section VII*    Other samples

### LEGISLATION AND ALLIED MATTERS

As in 1970 and 1971 there was little entirely new legislation affecting the work of the County Laboratory during 1972 and the anticipated storm of new measures consequent upon the entry of the United Kingdom into The European Economic Community had yet to break. There is reason to believe, however, that when the discussions at Government level reach agreement there may well be a fairly considerable increase in the work load of the enforcement authorities.

U.K. food legislation has followed a general pattern of setting out Statutory requirements for specific foods, or classes of foods, as and when the need for such standards becomes evident. The E.E.C. approach, however, appears to be a policy of legislating for every circumstance, an example of which is the proposed standard for chocolate, which seems to include not only those varieties with which we are familiar but also possible types which might appear in the future. Another, and fundamental, difference is that E.E.C. Standards will include prescribed methods of analysis, which is contrary to U.K. policy on food legislation, and Public Analysts are concerned that they may be required to use methods of analysis which are outdated and less suitable than methods in current use.

The necessity for the U.K. to consider E.E.C. food legislation, but which is still not finalised, may account for a regrettable delay in the promised action upon foods such as Hamburgers and Fish Fingers. The long awaited Ministry Food Standards Committee Report upon Fish Products has still not materialised.

During 1972 there was much hopeful anticipation of the effect of The Labelling of Food Regulations 1970, due to be implemented on 1st January, 1973. At the time of preparation of this Annual Report, in early 1973, it is already evident that a section of the food trade has either ignored this piece of legislation or is completely unaware of its existence. Certain interests, however, have discovered some sizeable loopholes which have, in effect, legalised some very dubious labelling practices.

## NEW LEGISLATION

### *Statutory Instruments*

Statutory Instruments, including those which were made at an earlier date, which came into effect in 1972 and those which will not come into effect until later, with the operative dates, are:—

The Bread and Flour (Amendment) Regulation, 1972 (1st November, 1972)

The Labelling of Food (Amendment) Regulations, 1972 (8th November, 1972)

The Lead in Food (Amendment) Regulations, 1972 (1st January, 1973)

The Therapeutic Substances (Supply of Antibiotics and Chemotherapeutic Substances for Agricultural Purposes) (Amendment) Regulations, 1972 (21st March, 1972)

The Deposit of Poisonous Waste (Notification of Removal and Deposit) Regulations, 1972 (3rd August, 1972)

The Poisons Rules, 1972 (1st February, 1973)

The Poisons List Order, 1972 (1st February, 1973)

### *Acts*

The Deposit of Poisonous Wastes Act, 1972

The Poisons Act, 1972

The Road Traffic Act, 1972

### *The Bread and Flour (Amendment) Regulations, 1972*

The list of permitted bleaching and improving agents is extended by the addition of azodicarbonamide, L-cysteine hydrochloride, and L-cysteine hydrochloride monohydrate.

Iron powder replaces reduced iron as the form in which iron is to be added to flour and ferrous sulphate is now a permitted alternative form of iron.

Azodicarbonamide is defined as the substance conforming to a description specification and requirements contained in the "Food Chemicals Codex 1966" — a publication of the American National Academy of Sciences, which very few U.K. Laboratories will possess. It is difficult to see why this specification could not have been included in the Schedule to the Regulations, as is the case with L-cysteine and iron powder.



The specifications of other substances are related to the British Pharmaceutical Codex 1954 or The British Pharmacopea 1968, which is curious since the former is obsolete and the latter is in the process of being replaced by the European Pharmacopoeia.

The replacement of reduced iron by iron powder has necessitated an amendment to The Arsenic in Food Regulations, 1959, but this has been included with The Bread and Flour (Amendment) Regulations, 1972, instead of as a separate amendment to the Arsenic Regulations.

### *The Labelling of Food (Amendment) Regulation, 1972*

The Labelling Regulations that were in force during 1972 were still the old Regulations of 1953, since the Amendment Regulations actually amended The Labelling of Food Regulation, 1970, but which did not come into force until 1st January, 1973.

Perhaps it was unreasonable to expect that within a space of 20 years a consolidated and readily understandable piece of legislation would have appeared. There can be no doubt, however, that the 1970 Regulations have proved to be so complex that some manufacturers may have given up trying. The first few months of 1973 have shown that there are some who have "just pressed on regardless" on the assumption that if all is well then nothing will happen but if they are wrong – then a Public Analyst will say so – thus do Public Analysts find themselves acting unwittingly as legal consultants to trade interests.

A full assessment of the situation must, however, be reserved until there has been a full twelve months' operation of the new Regulations, but the major disappointment has been the effect of the requirement which states that "the letters in each word in any designation . . . shall be in characters of uniform colour and size save that the initial letters of any word may be taller than any other letter in that word . . ."

It had been assumed that this would mean that the practice of giving description such as "Minced Beef in Gravy" with the words "Minced Beef" very much larger than the word "Gravy" would be stopped (canned minced beef is required to have a minimum of 95% of meat, whereas minced beef with gravy is required to have a minimum of only 75% of meat). But all it has been found to mean is that the letters in each *individual word* have to be the same size and colour.

There are provisions concerning the actual measurements of the letters but these are such that they are of little help and enforcement authorities are left with the necessity of establishing that the height of the letters is such as is calculated by undue or insufficient prominence to mislead – but there again there is a difficulty in that it could be held that the word "gravy" in the above example refers to a minor ingredient and should, therefore, be in small letters.

There can be little doubt that an opportunity to ensure that the public were protected by honest labelling has, in this instance, been missed.

It must, however, be stated that there are many manufacturers whose labelling is beyond reproach and it might be that a discerning public will become aware that some labels are better than others and direct their customer accordingly.

*The Lead in Food (Amendment) Regulations, 1972*

The effect of the amendment is to place a special restriction upon the amount of Lead in foods for babies and young children, of 0.5 p.p.m. on a prepared food.

This has been considered necessary because of a link between Lead and mental retardation.

*The Therapeutic Substances (Supply of Antibiotics, Chemotherapeutic Substances for Agricultural Purposes) (Amendment) Regulation, 1972.*

These Regulations extended the permitted sale or supply, without prescription, of animal feeding stuffs containing Virginiamycin to pork pigs, and feeds containing Flavomycin to calves. The amount of Virginiamycin permitted in a feed supplement sold or supplied without prescription is increased.

*The Deposit of Poisonous Wastes Act, 1972*

*The Deposit of Poisonous Wastes (Notification of Removal and Deposit) Regulations, 1972*

The Act makes it an offence to deposit any poisonous, noxious or polluting waste of a solid, semi-solid or liquid nature in circumstances in which danger might be caused to persons or animals or which might pollute a water supply.

This is a notification procedure under which notification of deposit or removal of such wastes must be given to the local authority and the river authority. Such notification must include a declaration of the nature and composition of the material.

The purpose of the Act is to control the disposal of toxic wastes, it does not place a general ban upon such disposal.

The Act was brought out in great haste following the outcry that resulted for the action of 'fly-tippers' who tipped Cyanides and other toxic substances with complete disregard for the possible consequences.

The Act has probably been effective in reducing the incidence of irresponsible dumping but it appears to contain no effective powers to prevent the tipping of a toxic waste on an authorised dump where a hazard may be created, not because of the nature of the substance itself, but because of what was already in the dump.

An advisory service is now operated by the County Laboratory whereby Local Authorities can send in copies of the notifications which they receive. Advice is given on the nature of the material to be dumped, with particular reference to any unusual or possible additional hazard.

An example of such advice is a case in which toxic substances had been sealed in steel drums and which it was proposed to bury – but the records kept by the Laboratory showed that a considerable quantity of acid had previously been dumped in the area and which would have corroded the drums and released their contents.

*The Poisons Act, 1972*

*The Poison Rules, 1972*

*The Poisons List Order, 1972*

The Act is a consolidatory measure, which provides for the continuation of The Poisons Board.



The Rules are the annual revision of the lists of substances regarded as Poisons for the purposes of The Pharmacy and Poisons Act, 1933, and the Poisons List differentiates between those poisons which can only be sold by an authorised seller of poisons and those which may be sold by a person on a Local Authority list.

#### *The Road Traffic Act, 1972*

This Act is a comprehensive measure, which repeals and replaces The Road Safety Act, 1967.

The prescribed limits for alcohol in blood or urine are unchanged.

#### PROPOSED LEGISLATION

##### *The Skimmed Milk with Non-Milk Fat Regulation, 1960*

These proposals are routine amendments to vary the requirements of the Regulations with respect to certain branded baby foods.

##### *The Colouring Matter in Food Regulation, 1966*

The first of the anticipated amendments to harmonise U.K. and E.E.C. legislation.

The principle proposals are to remove from the permitted list the seven colours Red 10B, Red 6B, Fast Red E, Oil Yellow XP, Oil Yellow GG, Red FB and Violet BNP.

Seven E.E.C. colours for general use are to be added – Indanthrene Blue, Patent Blue V, Quinoline Yellow, Acid Yellow, Brilliant Blue FCF, Violet 6B, Pigment Rubine.

Two others are to be permitted with restricted usage – Burnt Umber (for cheese rinds) and Methyl Violet (for marking the skins of citrus fruits or for marking raw and unprocessed meat).

#### REPORTS

##### *Ministry of Agriculture, Fisheries and Food*

##### *Food Standards Committee*

##### *Vinegar (January, 1972)*

It is strange, considering the adulteration of Vinegar which took place many years ago, that there has never been a Statutory Standard.

The accepted standard of not less than 4% of acetic acid arose from a letter in 1911 from the Local Government Board to the trade – a view which was accepted by the then Society of Public Analysts. The use of the term “Non-Brewed Vinegar” for a diluted solution of acetic acid was not stopped until 1950 when it was held to be a false trade description.

The proposals of the Food Standards Committee include the 4% of acetic acid standard and also that the term “Vinegar” should not be used alone but qualified by designations such as “Malt”, “Spirit”, etc.

No action appears to be contemplated with regard to the introduction of modern rapid vinegar production – the modern product is certainly “vinegar” as it might be defined and it contains not less than 4% of acetic acid but it contains much less of the secondary products of the fermentation process and consequently lacks some of the flavour and aroma of the vinegar of years gone by.



### *Offals in Meat Products (May, 1972)*

The use of offals in meat products is already subject to the Offals in Meat Products Order, 1953, which prohibits certain offals in uncooked meat products.

This Report divides offals into two groups, List A consists of permitted offal which may be used in cooked and uncooked products – and includes two offals, pancreas and thymus, which are prohibited by the 1953 Order in uncooked products. It is further proposed that List A offals should be specifically declared except when present in sausage, meat pie, meat pudding, sausage roll, vol-au-vent, faggot, hamburger, rissole, croquette, haggis or meat ball – when the description could be “permitted offal”. This is a somewhat extraordinary provision since there does not appear to be any meat product left, in which offal might be used, which would come into the category which will require a specific declaration!

Offals in List B would have to be declared as “Offal” as distinct from the “permitted Offal” of List A.

The distinction between List A and List B does not seem to be very informative as regards the public, but the real distinction is that List A, “permitted offal” may be used in both cooked and uncooked products but that List B “offal” may be used only in cooked products.

### *Date Marking of Food (July, 1972)*

This Report followed an interim Report published in 1971.

The Committee expressed the opinion that existing legislation was insufficient to safeguard the public against the sale of stale food.

Certain manufacturers operated voluntary schemes but many of such schemes used coded markings which were unknown to the purchaser and not always fully understood by the shopkeeper.

It is recommended that specific legislation should be introduced to make it compulsory for pre-packed foods, in the first instance, to be marked with a “sell by” date for short life foods, or the date of manufacture (or date of removal from cold store) for long life packs. Foods such as vacuum packed bacon to be marked by an “open by” date.

There proposals are welcomed as there is ample evidence in the samples examined in the County Laboratory that stale food is sold to unsuspecting purchasers, although at the same time the size of the problem should not be exaggerated.

### *Food Additive and Contaminants Committee Report on Liquid Freezants of Food (June, 1972)*

Food freezants are not controlled, at present, by specific legislation although they are subject to the general provision of the Foods and Drug Act, 1955.

Freezants considered in the Report are those that are used by direct contact with the food.

Liquid Carbon Dioxide and Liquid Nitrogen are in use in the U.K. and Liquid Dichlorodifluoromethane has been used in several other countries.

The advantage claimed for the procedure is that freezing is very quick and that the flavour, in particular of delicate fruits, is better retained than by conventional freezing.

It has been claimed that Dichlorodifluoromethane is particularly suitable in that the freezant is recycled within the equipment, which can also be portable, whereas the liquid carbon dioxide and liquid nitrogen equipment is bulky and operates with the total loss of the carbon dioxide or nitrogen.

The Committee recommended, however, that only carbon dioxide or nitrogen shall be used and not dichlorodifluoromethane, since there is some absorption of the latter by the food and that toxicological studies have not yet been completed. A further objection is that the recycling procedure could result in there being a concentration effect of substances such as residues of pesticides which could be extracted from one food and then applied to subsequent foods placed in the freezing unit.

#### *Review of The Preservatives in Food Regulations (July, 1972)*

It is proposed that the definition of a Preservative should be amended to – “Any substance which is capable of inhibiting, retarding or arresting the growth of micro-organisms or of masking the evidence of such deterioration”. A change was considered necessary to exclude additives, such as anti-oxidants, which were covered by other legislation.

No very drastic changes are recommended but the use of the currently permitted preservatives is extended and that the range of permitted Para-hydroxybenzoates should be extended.

The recommendation to permit the use of Sulphur Dioxide in finings for wine and beer, and in dried hops, sold by retail, is logical and in the interests of “home brewers”.

A recommendation to permit preservatives in Fruit Yoghurt is, however, difficult to justify – it is presumed that it is to take account of the use of preserved fruit but, nevertheless, the presence of a preservative in Yoghurt will adversely affect the micro-organisms which are an essential part of Yoghurt.

The recommendation to permit the inclusion of up to 1000 ppm of propionic acid in Christmas Puddings may reduce the proportion of mouldy Christmas Puddings examined in the County Laboratory – but a properly made and cooked Christmas Pudding should not need a preservative!

It is recommended that nystatin should no longer be permitted on bananas but that thiabendazole should be permitted as an anti-mould agent on both bananas and citrus fruits.

It is recommended that the permission to use tetracyclines in treating ice for fish chilling should be withdrawn.

#### *Supplementary Report on the Review of The Emulsifiers and Stabilisers in Food Regulation (September, 1972)*

It is recommended that starch and modified starch should continue to be exempt from the Regulations and that earlier restrictions upon the use of sorbitan and polyoxyethylene sorbitan esters of fatty acids and diacetyl sodium sulphosuccinate should be removed.

The continued use of citroglycerides in bread is considered to be justified. The Committee accepted, also, that there was a case for the use of propyleneglycol esters of fatty acids and lactic acid, sucrose esters of fatty acids, sucroglycerides and the sodium and calcium salts of stearoyl-2-Lactylic Acid.



The Committee were prepared to permit the polyglycerol esters of the dimerised fatty acids of soya bean oil in tin greasing emulsions, subject to a limit of 20 p.p.m. in the food.

Furcelleran and Xanthan Gum were also recommended as permitted emulsifiers and stabilisers.

*Working Party on the Monitoring of Foodstuffs for Heavy Metals*  
*Second Report – Survey of Lead in Food – June, 1972*

As a result of a comprehensive monitoring programme for lead, by the Ministry, it was concluded that the mean concentration in the diet was only 0.13 mg per kg (0.13 p.p.m.) and that the average daily intake was 200 microgrammes from food and a further 20 microgrammes from beverages.

The lead levels for individual foods were, in general, well below the present Statutory limits and it was only in the case of baby foods where stricter control was considered to be necessary.

NOTICES OF REVIEWS OF LEGISLATION

*Mineral Hydrocarbons in Food* (April, 1972)

It was announced that a review on mineral hydrocarbons in food was to be carried out. At the request of the Ministry, the County Laboratory was able to provide some very useful information concerning the incidence of mineral hydrocarbons in bread and in flour confectionery.

All 24 samples of bread examined had less than the existing prescribed limit of 0.2% of mineral oil, the amounts found ranging from nil to 0.06%.

Of 35 samples of sugar confectionery, however, 5 contained amounts of oil in excess of the prescribed limit – the highest amount found was 0.4% in a sample of wine gums (Mineral Oil is used for lubricating the moulds in which some sweets are formed).

*Antioxidants in Food* (May, 1972)

A full review of Antioxidants is to be carried out and which will, of necessity, take into account an E.E.C. Directive on the subject.

*Yoghurt, Other Cultured Milks, and Cream and Milk Desserts*  
(October, 1972)

This review is to take place in three stages, the first of which will be concerned with Yoghurt and its variations.

Public Analysts have had frequent occasion to object to products described as “Yoghurt”, not the least of which has been the replacement of true Yoghurt by a product made from skimmed milk. It is accepted that there is a market for a low-fat product but it should be correctly described.

The labelling has been unsatisfactory, also, in that some manufacturers omit the added culture from the required list of ingredients.

Representations on these matters have been made to the Ministry.



## OTHER REPORTS

### *Environmental Pollution*

#### *Royal Commission on Environmental Pollution, Second and Third Report*

The Second Report raises the important matter of whether the present confidential nature of information about waste from individual premises can continue to be justified and it takes the view that, apart from exceptional circumstances, it was in the public interest that information about wastes should be available not only to statutory bodies, but to others who can make use of such information to improve the environment.

The Third Report is concerned with the condition of British estuaries and coastal waters and recommends that the Department of the Environment should encourage river authorities to give notice to local authorities and industries, whose effluents are at present being accepted, that more stringent standards would be applied. It recommends, also, that river authorities which have in their jurisdiction, industrialised estuaries should take responsibility for the monitoring of certain critical substances.

## LABORATORY ORGANISATION AND EQUIPMENT

The first phase of a planned movement into automated methods of analysis has been developed around a Pye-Unicam AC60 Chemical Processing Unit. This apparatus, together with ancillary equipment, does not eliminate the need for trained and experienced staff but does ensure that by considerably reducing the amount of "manual labour" involved in analysis that more "thinking time" is available. Problems are solved by people who are given time to think, not by machines.

## STAFFING

As the 1st April, 1974, Reorganisation comes ever nearer so the hopes and fears for the future wax and wane.

To steer a middle course between pessimism and optimism for the future is not easy but the fact that staffing remained stable during 1972 must be a measure of faith in whatever the future holds.

The Reorganisation of Local Government can have but one object – the provision of an even more efficient and effective service to the public and which must require the full co-operation and enthusiasm of every Officer concerned.

I wish to record my thanks to all members of the Staff of the County Laboratory for their loyal support and, in particular, to the Deputy County Analyst, Mr. H. M. Bee, B.Sc., M.Chem.A., F.R.I.C.

## SECTION I

*Number of samples submitted under the various Acts, etc.,  
and their origin.*

### FOOD & DRUGS ACT, 1955.

	Milk			Drugs & Other Foods	Complaint Samples	Totals
	Compo- sition	Anti- biotics	Hypo- chlorites			
<i>County Council</i>						
W. & M. Dept. Inspectors ..	1,758	—	—	1,674	26	3,458
Health Dept. Inspectors ..	791	268	394	—	4	1,457
Private Purchasers .. ..	—	—	—	—	9	9
Local Authorities .. ..	—	—	—	—	146	146
	<u>2,549</u>	<u>268</u>	<u>394</u>	<u>1,674</u>	<u>185</u>	<u>5,070</u>
<i>Stoke-on-Trent</i>						
Inspectors .. ..	67	—	—	669	16	752
Private Purchasers .. ..	—	—	—	—	5	5
	<u>67</u>	<u>—</u>	<u>—</u>	<u>669</u>	<u>21</u>	<u>757</u>
<i>Newcastle B.C.</i>						
Inspectors .. ..	51	—	—	87	23	161
Private Purchasers .. ..	—	—	—	—	—	—
	<u>51</u>	<u>—</u>	<u>—</u>	<u>87</u>	<u>23</u>	<u>161</u>
<i>Stafford B.C.</i>						
Inspectors .. ..	48	—	—	93	15	156
Private Purchasers .. ..	—	—	—	—	6	6
	<u>48</u>	<u>—</u>	<u>—</u>	<u>93</u>	<u>21</u>	<u>162</u>
<i>Cannock U.D.C.</i>						
Inspectors .. ..	—	—	—	92	14	106
Private Purchasers .. ..	—	—	—	—	—	—
	<u>—</u>	<u>—</u>	<u>—</u>	<u>92</u>	<u>14</u>	<u>106</u>
	<u>2,715</u>	<u>268</u>	<u>394</u>	<u>2,615</u>	<u>264</u>	<u>6,256</u>

The above table does not include samples submitted by producers or manufacturers, such samples are listed under 'Miscellaneous Samples'.

### FERTILISER & FEEDING STUFFS ACT, 1926

			Fertilisers	Feeding Stuffs	Total
County Council	..	..	42	74	116
Stoke-on-Trent	..	..	8	6	14
Private Purchasers	..	..	—	8	8
			50	88	138

### CONSUMER PROTECTION ACT, 1961

#### The Toys (Safety) Regulations, 1967

County Council .. ..	25
Newcastle Borough .. ..	11
Stoke-on-Trent .. ..	4
	<u>40</u>

## THE PHARMACY AND POISONS ACT, 1933

County Council .. .. . 2

## TRADE DESCRIPTIONS ACT, 1963

County Council .. .. . 7

Borough of Newcastle .. .. . 2

Stoke-on-Trent .. .. . 2

—  
11  
—

## OTHER SAMPLES

### ATMOSPHERIC POLLUTION

	Lead Peroxide Cylinders	Rainguages	Total
Aldridge-Brownhills U.D.C. ..	24	24	48
Cannock U.D.C. .. .. .	—	35	35
Cheadle R.D.C. .. .. .	—	24	24
Newcastle B.C. .. .. .	—	12	12
Newcastle R.D.C. .. .. .	12	12	24
Rugeley U.D.C. .. .. .	12	12	23
Stone R.D.C. .. .. .	46	99	145
	94	218	312

### WATERS AND EFFLUENTS

	Drinking Water	Sewage		Swimming Baths	Others	Total
		Routine Domestic	Trade Wastes			
County Council ..	23	168	—	19	5	215
Stoke-on-Trent ..	13	—	—	63	—	76
Newcastle B.C. ..	7	—	1	57	2	67
Stafford B.C. ..	22	—	—	—	—	22
Cannock U.D.C. ..	3	—	—	—	1	4
Other Authorities ..	70	11	18	43	62	204
Private ..	3	—	1	—	25	29
	141	179	20	182	95	617

### THE ROAD SAFETY ACT, 1957

Private .. .. . 115

### POISONOUS WASTES ACT

Borough of Newcastle .. .. . 1

Other Authorities .. .. . 5

—  
6  
—

### MISCELLANEOUS

	Special Investigations	Toxicology	Totals
County Council .. .. .	13	1	14
Stoke-on-Trent .. .. .	4	6	10
Newcastle Borough .. .. .	4	16	20
Stafford Borough .. .. .	2	—	2
Cannock U.D.C. .. .. .	1	8	9
Other Authorities .. .. .	113	33	146
Private .. .. .	34	43	77
	171	107	278

Total, all samples, 7,775.



# SECTION II

## FOOD & DRUGS ACT, 1955

'E' - Examined

'U' - Unsatisfactory

SAMPLES	County Council		Stoke-on-Trent		Newcastle B.C.		Stafford B.C.		Cannock U.D.C.	
	E	U	E	U	E	U	E	U	E	U
<i>Dairy Products:</i>										
Milk, Ordinary (Composition)	2,421	40	53	-	40	-	35	-	-	-
„ Skimmed	-	-	-	-	-	-	-	-	-	-
„ Channel Island	128	3	14	-	11	-	13	-	-	-
„ Antibiotics	268	2	-	-	-	-	-	-	-	-
„ Hypochlorites	394	-	-	-	-	-	-	-	-	-
„ Complaints	22	19	1	1	4	4	2	1	3	3
„ Condensed	5	2	3	-	1	-	2	-	-	-
„ Dried	12	3	-	-	2	1	2	-	1	1
Cream	14	-	19	-	18	-	6	1	2	-
Butter	73	5	-	-	3	-	3	1	4	1
Margarine	19	-	-	-	1	-	2	-	1	-
Cheese	86	6	4	1	2	-	1	-	2	-
Ice Cream	41	-	22	-	-	-	2	-	4	-
Milk Puddings	18	1	3	-	-	-	6	-	3	-
Fermented Milk	5	5	4	4	-	-	-	-	1	1
Pesticide	3	-	-	-	-	-	-	-	-	-
Substitute	5	4	1	-	-	-	-	-	-	-
<i>Cereal Products:</i>										
Flour & Flour Mixes	36	1	-	-	1	-	4	1	2	-
Bread	43	21	-	-	1	1	2	2	1	1
Flour Confectionery	119	13	2	-	1	1	2	1	-	-
Pasta	4	-	-	-	-	-	-	-	-	-
Starch Products	10	-	-	-	-	-	5	-	-	-
Breakfast Cereals	14	2	-	-	-	-	1	1	-	-
Other Cereals	11	-	-	-	-	-	-	-	-	-
<i>Meat &amp; Meat Products:</i>										
Meat, Raw or Cooked	10	1	6	-	4	2	-	-	-	-
Meat, Cured or Corned	45	3	22	-	-	-	2	1	1	-
Sausages	143	12	268	19	23	3	5	2	20	6
Prepared Meat	137	12	62	6	3	2	13	-	6	-
Meat in Pastry	20	10	29	1	2	1	1	1	2	-
Spreads	12	-	-	-	-	-	-	-	-	-
Extract	16	-	-	-	1	-	1	-	-	-
<i>Poultry &amp; Poultry Products:</i>										
Poultry, Raw or Cooked	1	-	1	-	-	-	1	1	-	-
Prepared Poultry	25	1	8	1	3	1	-	-	-	-
Poultry in Pastry	2	2	-	-	-	-	-	-	3	1
Spreads	3	-	-	-	-	-	-	-	-	-
Eggs and Egg Products	3	1	-	-	-	-	-	-	-	-
<i>Fish &amp; Fish Products:</i>										
Fish, Raw or Cooked	21	1	1	-	-	-	4	1	1	-
Prepared Fish	22	5	3	-	-	-	-	-	-	-
Cured Fish	5	-	-	-	-	-	-	-	-	-
Spreads	3	1	1	-	-	-	-	-	-	-
<i>Fruit &amp; Fruit Products:</i>										
Fresh	6	1	1	-	-	-	-	-	4	-
Dried	33	2	24	-	2	-	1	-	5	-
Preserves	43	2	59	1	-	11	1	-	-	-
Canned or Bottled	45	6	-	-	-	-	-	-	2	-
Other Products	55	6	34	-	4	3	8	-	3	-
<i>Vegetables &amp; Vegetable Products:</i>										
Fresh	22	3	2	-	-	-	-	-	1	-
Dried	17	-	-	-	-	-	1	-	-	-
Canned or Bottled	28	5	3	1	1	1	-	-	2	-
Other Products	41	4	-	-	-	-	-	-	-	-
<i>Nuts &amp; Nut Products:</i>										
Nuts	18	-	16	-	-	-	1	-	1	-
Nut Products	9	-	12	-	-	-	-	-	-	-
<i>Sugar &amp; Sugar Products:</i>										
Sugars	8	1	-	-	-	-	2	-	-	-
Sugar Confectionery	81	9	-	-	1	1	-	-	2	-
Other Products	14	-	-	-	-	-	3	-	-	-
Substitute	5	2	-	-	-	-	-	-	-	-
<i>Oils &amp; Fats:</i>										
Animal	39	-	6	-	-	-	-	-	2	1
Vegetable	11	-	-	-	1	-	1	-	-	-

# FOOD & DRUGS ACT, 1955

'E' – Examined

'U' – Unsatisfactory

SAMPLES	County Council		Stoke-on-Trent		Newcastle B.C.		Stafford B.C.		Cannock U.D.C.	
	E	U	E	U	E	U	E	U	E	U
<i>Baby &amp; Infant Foods:</i>										
Milk Basis .. .. .	1	—	—	—	1	—	1	—	1	—
Cereal Basis .. .. .	5	2	—	—	—	—	—	—	—	—
Fruit/Vegetable Basis .. .. .	5	1	1	—	—	—	1	—	—	—
Meat Basis .. .. .	6	2	—	—	1	1	1	—	1	—
<i>Beverages:</i>										
Tea .. .. .	23	1	—	—	1	—	—	—	1	—
Coffee .. .. .	17	1	7	—	—	—	1	—	—	—
Cocoa .. .. .	4	—	—	—	—	—	2	—	—	—
Cereal .. .. .	—	—	—	—	—	—	—	—	—	—
<i>Fermentation Products:</i>										
Beers .. .. .	44	8	—	—	1	1	—	—	5	1
Wines .. .. .	7	—	—	—	—	—	—	—	—	—
Spirits .. .. .	19	—	—	—	—	—	—	—	1	—
Vinegar, Pickles, etc. .. .. .	54	4	38	1	3	1	3	1	2	1
Other Products .. .. .	4	—	—	—	—	—	—	—	—	—
Brewing Materials .. .. .	7	4	—	—	—	—	—	—	—	—
<i>Soft Drinks:</i>										
Mineral Waters .. .. .	40	3	—	—	—	—	4	2	5	—
Squashes, Cordials, etc. .. .. .	43	2	9	—	—	—	3	1	5	—
Others .. .. .	10	1	—	—	—	—	—	—	1	1
<i>Spices Flavourings etc.:</i>										
Herbs & Spices .. .. .	30	—	3	—	5	—	—	—	1	—
Flavours & Essences .. .. .	5	—	—	—	2	—	—	—	—	—
Colours .. .. .	3	—	—	—	2	—	—	—	—	—
Mineral Adjuncts .. .. .	7	1	1	—	2	—	—	—	—	—
<i>Remedial Foods:</i>										
Slimming Foods .. .. .	5	1	—	—	—	—	1	1	—	—
Vitamin Foods .. .. .	2	—	—	—	—	—	—	—	1	—
Special Diets .. .. .	—	—	—	—	—	—	—	—	—	—
Diabetic Foods .. .. .	2	—	—	—	—	—	—	—	1	—
<i>Drugs:</i>										
Analgesics & Antipyretics .. .. .	6	—	2	—	3	—	—	—	—	—
Antiseptics & Disinfectants .. .. .	2	—	—	—	—	—	—	—	—	—
Digestic Aids .. .. .	4	2	—	—	2	—	—	—	—	—
Laxatives & Purgatives .. .. .	4	—	—	—	3	—	—	—	—	—
Respiratory System .. .. .	11	—	9	—	3	—	—	—	1	1
Tonics .. .. .	2	—	—	—	1	—	—	—	—	—
Emollients .. .. .	1	—	1	—	—	—	—	—	—	—
Vitamins & Mineral Preparations .. .. .	1	—	1	—	—	—	—	—	—	—
	5,050	250	757	36	161	24	162	19	106	20

## UNSATISFACTORY FOOD AND DRUGS SAMPLES—STATISTICS

The numbers of samples listed in the previous table, that were the subject of adverse reports, is given as totals and as percentages of the numbers submitted, in the following table.

	Milk			Drugs & Other Foods	Complaint Samples	Total
	Compo- sition	Anti- biotics	Hypo- chlorites			
County Council .. .. .	43 (1.7%)	2 (0.7%)	0 (—)	69 (4.1%)	136 (74%)	250 (4.9%)
Stoke-on-Trent .. .. .	0 (—)	0 (—)	0 (—)	30 (4.5%)	6 (29%)	36 (4.8%)
Newcastle B.C. .. .. .	0 (—)	0 (—)	0 (—)	7 (8.0%)	17 (74%)	24 (14.9%)
Stafford B.C. .. .. .	0 (—)	0 (—)	0 (—)	3 (3.2%)	16 (76%)	19 (11.7%)
Cannock U.D.C. .. .. .	0 (—)	0 (—)	0 (—)	10 (10.9%)	10 (71%)	20 (18.9%)

UNSATISFACTORY MILK SAMPLES

Details of the 43 Official samples of Liquid Milk reported as of unsatisfactory composition are as follows:—

Source	Mark	Type	Observations	Mark	Type	Observations
<i>County Council— Health Dept.</i>						
	F.32	P	1.5 % added water	XF.540	U	4.0 % added water
	*XD.45	U	10.0 % def. in fat	XF.586	U	15.0 % def. in fat
	XD.165	U (CI)	8.8 % def. in fat	F.63	P	1.7 % added water
	*XD.230	U	6.7 % def. in fat	XF.553	U (CI)	10.0 % def. in fat
	XD.338	U (CI)	17.5 % def. in fat			
<i>County Council— W. &amp; M. Dept.</i>						
	H.4706	U	3.0 % added water	19 B/M	U	3.3 % def. in fat
	H.4778	U	0.8 % added water	24 B/M	U	3.3 % def. in fat
	H.4815	U	0.5 % added water	†H.339	U	5.0 % def. in fat
	*88 B/H	U	3.3 % def. in fat	H.352	U	3.3 % def. in fat
	H.4930	U	5.7 % added water	†26 B/M	U	38.3 % def. in fat
	91 B/H	U	7.3 % added water	†27 B/M	U	40.0 % def. in fat
	92 B/H	U	6.9 % added water	†28 B/M	U	36.7 % def. in fat
	93 B/H	U	6.0 % added water	38 B/M	U	3.3 % def. in fat
	94 B/H	U	4.1 % added water	39 B/M	U	4.9 % added water
	95 B/H	U	6.5 % added water	42 B/M	U	10.0 % def. in fat
	96 B/H	U	6.7 % added water	H.624	U	2.8 % added water
	H.4968	U	1.2 % def. in S.N.F.	H.655	U	0.7 % added water
	H.58	U	2.1 % added water	50 B/M	U	1.0 % added water
	9 B/M	P	0.7 % added water	H.860	U	0.8 % added water
	11 B/M	U	1.0 % added water	56 B/M	U	3.2 % added water
	*12 B/M	U	3.3 % def. in fat	57 B/M	U	1.8 % added water
	*13 B/M	U	10.0 % def. in fat	H.1231	U	21.6 % added water

4 samples that were reported as deficient in fat were subsequently shown to be genuine by Appeal-to-Cow samples, these samples are marked † in the above table. 5 samples that were deficient in both fat and solids-not-fat were found to be free from added water by the Freezing Point Test (Hortvet), these samples are marked \* in the above table.

Of the samples that were reported as genuine, 83 were deficient in solids-not-fat, but were shown to be free from added water by the Freezing Point Test (Hortvet).

ANTIBIOTIC TEST

Antibiotics are used to treat mastitis and the consumption of milk from such cows could constitute a health hazard, particularly to those persons who are sensitive to antibiotics.



Of the 268 samples examined for Antibiotics, 2 samples were found to contain antibiotics:—

DAB.503, 0.10 I.U.'s of Pencillin per millilitre of milk

DAB.860, 0.03 I.U.'s of Pencillin per millilitre of milk

Subsequent samples from the same sources were free from Antibiotics.

#### HYPOCHLORITE TEST

Solutions of hypochlorites are used for the sterilisation of dairy equipment, but none should gain access to the milk.

394 samples were examined for the presence of hypochlorites and all were found to be satisfactory.

### OTHER FOODS AND DRUGS AND COMPLAINT SAMPLES

#### DAIRY PRODUCTS

##### *Milk*

Viewed against the very large amount of milk that is sold, 32 complaints of dirty bottles or other contamination, of which 28 were justified, may not seem to be important – but this type of statistical reasoning ignores people as individuals. It is no comfort to the purchaser who finds something horrid in the daily “pinta” to be sold that the chance of getting a dirty bottle is less than one in a million (or whatever is the current estimate) – as far as they are concerned the contamination rate for them was 100% that day and they feel that they have a right to be angry.

Great strides have been made in the Dairy Industry by the use of electronic devices to detect and eliminate dirty bottles but such devices are not infallible and there is still, and probably always will be, the chance of human error.

There must, however, be co-operation from the public – bottles are still not always rinsed out before being put out for the roundsman, left lying about in dirty conditions or “borrowed” for other purposes.

The problem of leucocyte cells in milk, arising from sub-clinical mastitis, was less in evidence than in previous years and only one sample, Sterilised Milk, Rugeley U.D.C., FC.72/126, contained a visible quantity – 21 p.p.m. by volume.

Two bottles of Sterilised Milk contained considerable amounts of added water, Newcastle-under-Lyme B.C., FC.72/134, 75% added water and County 40 B/P, FC.72/136, 90% added water. In both cases defective seals had permitted the greater part of the milk to be displaced by water during the sterilisation process.

Two further bottles of Sterilised Milk, Newcastle-under-Lyme B.C. FC.72/171 and County 6 B/R, FC.72/177, had soured due, in all probability, to defective seals.

A more serious contamination concerned a bottle of Pasteurised Milk, Newcastle-under-Lyme B.C. FC.72/125, which included 25% of a strongly alkaline solution – probably left in the bottle by a malfunction of the bottle washing plant. Fortunately the effect of the alkaline had turned the milk a yellow colour which was noticed in time and none of the liquid had been drunk.

Cement was found in five bottles. Cannock U.D.C., FC.72/170, Cannock R.D.C., FC.72/26 and FC.72/49 and FC.72/197, and Newcastle-under-Lyme B.C., FC.72/199. No. FC.72/197 also contained Cladosporium mould. A further bottle, Stoke-on-Trent, FC.72/145, was thought to contain cement, but was found to contain fine sandy soil. Such contamination usually occurs on building sites but it is not unknown for the ‘do-it-yourself’ enthusiast to use a milk bottle for adding water when making up small amounts of cement.

Fruit fly pupae (*Drosophila*) were present in two bottles, Cannock R.D.C. FC.72/219, and Rugeley U.D.C. FC.72/209. Fruit flies are very partial to milk residues left in unwashed bottles and the pupae are so firmly attached to the glass surface that they are not removed by the dairy bottle washing plant. Contamination of another bottle, Cannock U.D.C. FC.72/161, comprised some fifty larvae of the common blowfly together with parts of a blowfly and other debris. All this foreign matter was loose in the milk, which raised the presumption that the bottle had somehow by-passed the washing plant.

Other specifically identified foreign matter found was, a plant leaf, County 12 A/S, FC.72/137; paint residue, County 85 A/T, FC.72/245 and pieces of grey card, Cannock U.D.C., FC.72/218.

Fine particles of carbon were present in FC.72/237, Cheadle R.D.C., and iron compounds with carbon in FC.72/50, Cannock R.D.C. Circular spots on the inner surface of the bottle in FC.72/247, Lichfield R.D.C., approximately 1mm in diameter, appeared to be of graphite, but no clue to their origin was discovered.

Miscellaneous debris of mineral and vegetable origin was found in four bottles. Aldridge-Brownhills U.D.C., FC.72/32, Lichfield R.D.C., FC.72/96 and FC.72/97, and Stafford B.C., FC.72/66.

Denatured milk residue associated with growths of mould were present in two bottles, Cannock R.D.C., FC.72/108, and Rugeley U.D.C., FC.72/243.

The lid of a milk churn, County FC.72/203, had a growth of mould on the inner surface, mainly Cladosporium.

### *Condensed Milk*

Two cans of Full Cream Condensed Milk, County 22 B/R, FC.72/239, and Tamworth FC.72/48, both consisted of approximately 10% of the original contents and 90% of water. In both cases the cans were defective, allowing the greater part of the contents to be displaced by water during the sterilisation process.

### *Milk Substitute*

Four cans of a dietary milk substitute, Seisdon R.D.C., FC.72/78/79/80/109, were contaminated to varying extents by fragments of aluminium metal, which appears to have been produced during the manufacture of the cans, which had aluminium foil seals. One can, FC.72/78, rather surprisingly contained, also, a few minute flakes of blue paint.



## *Dried Milk*

The labelling of Dried Milk continued to be unsatisfactory. Three samples, County 94 A/H, FD.72/542; 1 B/P, FD.72/67, and Newcastle-under-Lyme B.C. 71, FD.72/X592, described as “Instant Skimmed Milk”; and sold in cans, were criticised for not including the words “Dried” in the designation. “Instant” is not a synonym for “Dried” and for the majority of purposes dried milk has to be reconstituted with water before it becomes suitable for instant use.

Three samples, including one that was criticised for the description, County 57 B/U, FD.72/1565; Cannock U.D.C., 2/72, FD.72/X99, and Newcastle-under-Lyme B.C. 71, FC.72/X592, contained water in excess of the limit of 5% prescribed by The Dried Milk Regulations, 1965. The amounts being 7.7%, 7.2% and 7.0% respectively.

## *Butter*

Sixteen samples of Butter, Leek U.D.C., FC.72/6 – 9, FC.72/13 – 20, and FC.72/27 – 30, were examined for a poisonous substance following an allegation that butter supplies had been contaminated. All were free from contamination.

Three samples of Butter were found to contain foreign matter, Lichfield R.D.C., FC.72/98 – a white, rubber-like material containing an acetone-type solvent and probably a synthetic adhesive. Lichfield R.D.C., FC.72/210 – a small piece of grey coloured soft rubber. Stafford B.C., FC.72/215 – inclusions of iron rust and common salt.

Four samples of Butter had deteriorated and were contaminated by growths of moulds, Cannock U.D.C., FC.72/121, *Penicillium* and *Stemphylium* Moulds; Cannock R.D.C., FC.72/60, *Fusarium* Mould; Cannock R.D.C., FC.72/256, *Penicillium* Mould; Rugeley U.D.C., FC.72/41, *Geotrichum* and *Cladosporium* Moulds and also yeasts.

## *Cheese*

A sample described as “Medium Fat Soft Cheese with Celery”, Stoke-on-Trent 597A, FD.72/X91, had been prepared from Full Fat Soft Cheese and should have been described accordingly.

Two samples of cheese contained foreign matter – Lichfield City, FC.72/205, a fragment of rusted iron measuring  $12 \times 0.7 \times 0.7$  mm; Rugeley U.D.C., FC.72/259, part of a label used to mark the cheese from which the portion had been cut.

Two samples of prepacked cheese, Lichfield City FC.72/150 and Lichfield R.D.C., FC.72/116, were contaminated by growths of *Penicillium* mould. In both cases the wrappers had suffered damage. The former was wrapped in a laminate of plastic film and aluminium foil, but the plastic film had disintegrated, apparently due to loss of the plasticiser. The latter had what had been a vacuum sealed plastic film, but which had been perforated.

Gritty matter in a Cheese Spread, Lichfield R.D.C., FC.72/4, was identified as Calcium Phosphate and had evidently resulted from an interaction between the calcium compounds natural to the cheese and the phosphate emulsifying agent.



An intensely bitter flavour in a portion of cheese, Cannock R.D.C., FC.72/39, was attributed to the action of proteolytic bacteria.

### *Milk Pudding*

A sample sold by a "trade" name, County 10 B/T, FD.72/1539, consisted of a thickened skimmed milk, flavoured with sugar and chocolate, of the nature of a custard, but was not marked by the appropriate designation.

### *Fermented Milk Products*

The labelling of Yoghurt and Yoghurt Products was still unsatisfactory in a number of instances and there has been much correspondence with manufacturers.

True Yoghurt is made by the bacteriological fermentation of whole milk, or milk that has been concentrated, and should, therefore, contain not less than 3% of fat. The greater proportion of so-called "Yoghurt" produced in this country today is, however, made from skimmed milk and contains very little fat. It is contended that such products should be described and/or labelled in such a way that the purchaser is made aware that the product is not true Yoghurt but a product which has been deprived of the greater part of its fat. Such a requirement would be satisfied by qualifying the description "Yoghurt" with the words "Low Fat", or other acceptable phrase, whenever the description appears. The phrase "Low Fat" to be boldly and honestly displayed.

A manufacturer wrote such an indignant letter in defence of the low fat product, indicating much pride in the low fat content, that it seemed odd that the labels had the "Low Fat" qualification as inconspicuous as possible.

Real Fruit Yoghurt (Strawberry), County 24 B/V, FD.72/1441, contained less than 1% of fat and should, therefore, have been qualified as "Low Fat".

A product described as "Live Skim Milk with Passion Fruit and Wine", County 15 B/V, FD.72/1432, was described elsewhere on the container as "Yoghurt" without the "Low Fat" qualification.

"Yoghurt with Lime and Lemon", Stoke-on-Trent, 53A, FD.72/X86, sold from a "Pure Food" establishment also included low fat Yoghurt without the necessary qualification, but most curiously "Lime Emulsion" in the list of ingredients and which turned out to be Lime Oil emulsified by a "wicked" additive – Propylene Glycol. The manufacturer promptly discontinued its use and substituted an alternative material which was shown to be entirely of natural origin. This was an interesting case, in which the issue of an adverse Certificate resulted not only in a better product but also a happy and indeed grateful manufacturer.

"Yoghurt with Coffee and Rum", Stoke-on-Trent 52A, FC.72/X85, contained a negligible amount of Rum, the ingredients were listed in the wrong order and the "Low Fat" qualification had been omitted. A subsequent sample, Stoke-on-Trent, 596A, FD.72/X890, contained 0.5% of rum and an improved, although not entirely satisfactory label.

The listing of ingredients were still unsatisfactory with some manufacturers. Some readily agreed that the added bacterial culture was an ingredient, but others proved to be very 'sensitive' on the subject. One manufacturer claimed that Yoghurt production "goes back thousands of years, before bacteriology was invented", but appeared to confuse Yoghurt with milk that had merely turned sour. The origin of Yoghurt production probably goes back no more than a few hundred years and may be found in the folk-lore of Bulgaria rather than in the cave painting of primitive man. "Bacteriology" did not have to be invented – the early Yoghurt makers would have learnt by experience how to maintain their "cultures" – they would have no knowledge of the science of what they were doing – no stainless-steel equipment or white overalls, but they knew what to do and what not to do and in that sense they were the forerunners of modern industrial bacteriologists.

In all, four samples were criticised for not including the culture in the list of ingredients, County 61 B/J, FD.72/8, and 16 B/P, FD.72/685; Stoke-on-Trent, 106A, FD.72/X191; Cannock U.D.C., 57/72, FD.72/X658.

It is hoped that the awaited findings of The Food Standard Committee of The Ministry of Agriculture, Fisheries and Food will settle, once and for all, the matter of Yoghurt Labelling.

A complaint sample of Yoghurt, Lichfield R.D.C., FC.72/94, was contaminated by *Penicillium* mould.

## CEREAL PRODUCTS

### *Flour*

Foreign matter in a bag of plain flour, Rugeley U.D.C., FC.72/189, comprised 22 pellets of rodent excreta.

Insects in another bag of flour, Stafford B.C., FC.72/154, were identified as the nymphal and adult stages of the cereal psid, *Liposcelis* (Troctes) *Divinatorius*.

### *Bread*

As is the case with milk, the number of complaint samples of bread, 27, is but a minute fraction of the number of loaves baked. Never-the-less a contaminated loaf is a serious matter and a personal tragedy to the busy mother with hungry mouths to feed and the shops closed.

Four samples Rugeley FC.72/85, FC.72/142, FC.72/163; Uttoxeter U.D.C., FC.72/182, contained iron compounds associated with oil, indicating contamination from the bakery machinery.

Three other samples, Cannock U.D.C., FC.72/51; Lichfield R.D.C. FC.72/90 and Private FC.72/113P, also contained iron, in a finely divided state. No oil was detected however, and it was considered that incorrect mixing of the iron mineral supplement in the flour had caused the discoloration of the dough.

Discoloration by bakery char was present in four loaves, Leek U.D.C. FC.72/86; Lichfield City, F.C.72/46; Lichfield R.D.C., FC.72/260 and Rugeley U.D.C., FC.72/178.

Three loaves of bread, County 96 B/J, FC.72/162; Cannock R.D.C., FC.72/175 and Stafford B.C., FC.72/164A, were contaminated by moulds. All three contained *Cladosporium* and *Penicillium* moulds but sample FC.72/162 also contained *Aspergillus* and sample FC.72/164A *Alternaria* moulds.



Two partly baked loaves, Aldridge-Brownhills U.D.C., FC.72/176 and Private FC.72/89P, were contaminated by moulds, the former with *Penicillium*, *Aspergillus* and *Cladosporium* and the latter with *Cladosporium* and *Penicillium*.

Rye Bread Slices, Leek U.D.C., FC.72/212 sold in a packet, were a mass of *Penicillium* mould. The style of packing was so similar to that of the more familiar Rye Crispbreads that it was evident that it had not been understood that it was fresh bread and that the importance of the statement on the packet that it should be kept in a refrigerator, had not been appreciated.

Specific items of foreign matter found in bread comprised, a 10cm length of oily string, County 13 A/S, FC.72/143. Two fragments of fused ferrous metals, County 45 B/O, FC.72/207. Part of a small moth, Stafford B.C., FC.72/221. A common wasp, Cannock R.D.C. FC.72/216. Rodent Hairs, Cannock RDC, FC.72/99. Bituminised Paper, Paper, Lichfield City, FC.72/21. Iron Scale, Seisdon R.D.C., FC.72/56.

Three loaves, Newcastle-under-Lyme BC., FC.72/232; Stone R.D.C., FC.72/104 and FC.72/139, contained deposits of miscellaneous debris – iron rust, carbonaceous matter, etc.

A private enquiry, FC.72/190P/191P, concerned the possible presence of wheat flour in rye bread that had been prescribed for a special diet. No wheat flour was detected in the actual bread, although some so-called rye breads do include 20-30% of wheat, but the outer surface of the bread had been dusted with wheat flour.

### *Flour Confectionery*

“Milk Chocolate Biscuits with Banana Flavoured Cream Filling”, County 88 B/K, FC.72/1146, would not, because of the particular context and usage of the word “Cream” be expected to contain real cream. But the packet was also marked “New-more Cream”, omitting the word “filling” i.e. the word “Cream” had been used as a noun instead of as an adjective to describe the texture of the filling. The filling did not contain any fat of dairy origin.

A sample described on the packet as “Sliced Cake”, County 16 B/U FC.72/1560, provided a foretaste of the Common Market. The main description was in French with an English translation in smaller print. A translation of the French “Pain d’épices” is, however, “Ginger bread” and that is what the sample proved to be. A further curiosity was that the list of ingredients made no mention of the ginger flavouring that was present.

Of two packets of Crumpets, one Rugeley FC.72/62, was contaminated by *Penicillium* and *Cladosporium* moulds, but the other, Kidsgrove U.D.C., FC.72/201, was discoloured only by bakery char.

A Chocolate Sponge, Rugeley U.D.C., FC.72/153, was contaminated by *Aspergillus* mould. Trifle Sponges, Rugeley U.D.C., FC.72/200, had a mixed “Flora” of *Aspergillus glaucus*, *Penicillium* and *Sporendonema Sebi*.

69 separate colonies of mould were counted on the surface of a Custard Tart, Rugeley U.D.C., FC.72/222 and identified as *Cladosporium* and *Penicillium*.



The "Spots" on another Custard Pie, Lichfield City, FC.72/146, consisted however, only of grated nutmeg and a little carbonaceous matter.

Foreign bodies identified were, part of a beetle of the Scarabaeid family on a Fruit Tart, Cheadle R.D.C., FC.72/196. A human hair partly embedded in a Biscuit, Lichfield City, FC.72/242. Unidentified vegetable matter, possibly part of a seed coat in Chocolate Sponge Pudding, Newcastle-under-Lyme, FC.72/257. A fragement of meat connective tissue in a Tea Cake, Rugeley U.D.C., FC.72/71. Part of a Flour Label in a piece of Fruit Cake, Rugeley, U.D.C., FC. 72/147. A splinter of wood 35mm in length in a Scone, Private FC.72/179P.

Two Cracker Biscuits, Lichfield City FC.72/105 and FC.72/226, with an interval of six months in between, were of the same Brand and both showed abnormalities which appeared to show some lack of care in manufacture. The former had adhering to it a deposit of fat mixed with starch and salt and containing a number of textile fibres. The latter had inclusions of a mixture of fat and baking powder.

A somewhat unusual request, Private FC.72/149P, was to examine part of a wedding cake that had been saved as a Christening Cake for the first born. The cake was stated to be three years old, but was found to be wholesome.

### *Breakfast Cereals*

A wheat flake biscuit, Stafford B.C., FC.72/213, contained a thin layer of light brown compressed material, but which was found to consist only of wheat tissues. It had probably been formed by some malfunction of the manufacturing plant.

Porridge Oats, County 15 B/S, FC.72/223, contained 87 living larvae of the Brown House Moth. *Hofmannophila pseudospretella*. The oats were also infested with mites, not only the common cereal mites, *Tyroglyphus longior* but also the hunting mites *Cheyletus eruditus* that prey upon ordinary mites.

Mixed Cereals with Fruit and Nuts, Cannock R.D.C., FC.72/234, was infested with the larvae of the Flour Moth, *Ephestia Kuhnella*.

## MEAT PRODUCTS

### *Meat, Raw or Cooked*

A frozen Pork Chop, County 93 A/P, FC.72/217, had on the surface part of a common house-fly, *Musca domestica*.

Liver which had disintegrated on cooking, County FC.72/229, was thought to have been treated with an excess of proteolytic enzymes, but none were detected.

### *Cured or Corned*

#### *Corned*

#### *Corned Beef*

The problem of faulty preparation of the meat reappeared in 1972 and there were two instances of Corned Beef, containing epidermal tissue, with attached hairs, Cannock R.D.C., FC.72/180 and Newcastle-under-Lyme B.C. FC.72/159.

Discoloration of one sample of Corned Beef, Stafford B.C., FC.72/93 was due to contamination by iron.

Foreign matter in Corned Beef, Lichfield R.D.C., FC.72/250 consisted of rusted steel wool.

*Cured*

Canned Tongue, Newcastle-under-Lyme, FC.72/59 was alleged to contain a worm. The object, which did have a superficial resemblance to a “worm” was found to be a slice of epidermal tissue from the Tongue.

Slices of Boiled Ham, Newcastle-under-Lyme, FC.72/174, were very heavily infested with the larvae of the common blue bottle, *Calliphora erythrocephala*.

*Sausages*

Of the 457 samples examined for composition, 26 comprising 25 of Pork Sausage and one of Pork and Beef Sausage were deficient in meat, 5.7% of the samples examined.

Under the Sausage and Other Meat Product Regulations 1967, Pork Sausages are required to contain not less than 65% of meat, and Other Sausages not less than 50% of meat. The lean meat must be not less than 50% of the prescribed minimum total meat content.

*Sausages Deficient in Meat*

Type	Source	Mark	Ref.	Lean Meat %	Fat Meat %	Total %
Pork .. ..	County .. ..	72 B/J	FD.72/101	39.7	14.8	54.5
” .. ..	” .. ..	72 A/H	122	26.6	19.2	45.8
” .. ..	” .. ..	5 B/O	1108	39.6	19.5	59.1
” .. ..	” .. ..	3 B/S	1177	22.8	39.0	61.8
” .. ..	” .. ..	60 B/O	1517	25.5	37.1	62.6
” .. ..	” .. ..	61 B/O	1518	26.0	35.0	61.0
” .. ..	” .. ..	16 B/T	1569	25.3	36.7	62.0
” .. ..	” .. ..	17 B/T	1570	25.3	33.7	59.0
” .. ..	Stoke City ..	49A	X67	36.6	24.1	60.7
” .. ..	” .. ..	87A	X155	28.5	21.2	49.7
” .. ..	” .. ..	15	X244	41.9	13.7	55.6
” .. ..	” .. ..	266A	X413	28.6	28.4	57.0
” .. ..	” .. ..	38	X469	34.7	29.3	64.0
” .. ..	” .. ..	446A	X684	49.5	7.9	57.4
” .. ..	” .. ..	475A	X719	42.0	17.5	59.5
” .. ..	” .. ..	515A	X773	42.9	20.3	63.2
” .. ..	” .. ..	520A	X778	24.6	41.6	66.2
” .. ..	” .. ..	68	X804	41.9	17.5	59.4
” .. ..	” .. ..	573A	X864	41.7	18.5	60.2
” .. ..	” .. ..	592A	X883	36.0	19.6	55.6
” .. ..	Newcastle B.C. ..	1	X78	39.2	20.8	60.0
” .. ..	” .. ..	6	X83	45.9	18.3	64.1
” .. ..	” .. ..	68	X427	40.4	23.1	63.5
Pork & Beef ..	Cannock U.D.C. ..	9/72	X118	31.0	15.7	46.7
Pork .. ..	” .. ..	63/72	X687	36.4	26.4	62.8
” .. ..	” .. ..	65/72	X689	40.8	22.2	63.0

Under The Preservatives in Food Regulations 1962 the presence of preservative in Sausages must be declared. It would not seem to be unreasonable to expect that by now this requirement would be universally observed, yet 13 samples contained undeclared preservative (Sulphur Dioxide).



*Saugages containing undeclared Sulphur Dioxide Preservative*

Type	Source	Mark	Ref.	Sulphur Dioxide
				p.p.m.
Pork .. ..	County .. ..	64 A/O	FD.72/195	310
„ .. ..	„ .. ..	34 A/P	447	190
„ .. ..	„ .. ..	47 B/O	1461	60
„ .. ..	„ .. ..	46 B/O	1471	130
„ .. ..	Stoke City .. ..	336A	X512	445
„ .. ..	„ „ .. ..	375A	X555	210
Beef .. ..	„ „ .. ..	447A	X685	110
Pork .. ..	„ „ .. ..	459A	X703	100
„ .. ..	„ „ .. ..	634A	X934	185
„ .. ..	Stafford B.C. .. ..	1314	X342	50
„ .. ..	Cannock U.D.C. .. ..	82/72	X887	110
„ .. ..	„ .. ..	83/72	X888	220
„ .. ..	„ .. ..	84/72	X889	140

The Labelling of Food Regulations 1970, effective from the 1st January 1973 will require not only a declaration of preservative but also a declaration of added colour – such declaration to be in “close proximity” to the sausages and not just a notice displayed in the shop. At the time of the preparation of this Report, in early 1973, it is evident that the further requirement is either almost entirely unknown to shop-keepers or that many have simply chosen to disregard the requirement.

One sample of Pork Sausage, Stoke-on-Trent, 219A, FD.72/X361, contained 600 ppm of Sulphur Dioxide, which is in excess of the maximum permitted amount of 450 ppm.

A Sausage, Stoke-on-Trent, FC.72/107, that had formed part of a mixed grill was submitted following a complaint of an unusual flavour. The Sausage was found to contain approximately 2% of a phosphate salt. Phosphates are sometimes added in small amounts to emulsify the fat and to minimise shrinkage on cooking and it was apparent that, in this instance, the amount added had been excessive or that it had not been properly incorporated in the mix.

A metal hook found in a Sausage, Private FC.72/158P, was identified as part of a hook such as is used for attaching labels to carcasses of meat.

### *Prepared Meats*

#### *Meat in Gravy*

Two samples of Stewed Steak in Gravy, Stoke-on-Trent 582A, FD.72/X813 and 632A, FD.72/X932, were deficient in meat, containing 69.6% and 70.5% respectively instead of the required minimum of 75% of meat.

Scotch Minced Beef with Gravy, Stoke-on-Trent, 55A, FD.72/X88, had a satisfactory meat content 78.6% but was criticised because the words “with gravy” were not considered to be sufficiently prominent. Subsequent samples of the same Brand have been satisfactorily labelled.



The inclusion of epidermal tissue referred to under "Corned Beef" appeared also in a can of Stewed Steak with Gravy, Newcastle-under-Lyme, FC.72/122 which contained approximately 300 fine hairs of bovine origin and 31 small fragments of epidermal tissue.

Foreign matter in a can of Stewed Steak, Cannock R.D.C., FC.72/72, was identified as a bandage.

Two cans of Stewed Steak in Gravy, Stoke-on-Trent, 1PH, FC.72/117 and Lichfield R.D.C., FC.72/133, had undergone putrefication. Both cans had been penetrated by a sharp instrument such as a knife and which had permitted the entry of spoilage organisms.

There is little doubt that this type of damage, which has been observed also, in other foods, arises from the practice by shopworkers of "slashing" open cardboard cartons with sharp knives. A practice which cannot be too strongly condemned.

### *Hamburgers etc.*

It seemed that by 1972 the message that all Public Analysts required 80% of meat for these meat products, had at last got through and only two samples were criticised for their meat content. Beefburgers, County 9 A/P, FD.72/1972 contained 68.9% of meat and Beefburgers, Stoke-on-Trent, 503A, FD.72/X711, contained 75% of meat.

A complaint Beefburger, Rugeley U.D.C., FC.72/195, showed no evidence of suspected putrefication, but had become acid (0.3% as acetic acid) by fermentation of the carbohydrates.

Hamburgers in Gravy are required to contain not less than 60% of meat (i.e. 75% of 80%) but most manufacturers now include the 12.5% of onion that enables them to take advantage of the lower standard in The Canned Meat Product Regulations 1967 of 50% of 80%, i.e. 40% of meat. All such samples examined appeared to contain the requisite amount of onion and complied with the 40% standard. One sample however, Stoke-on-Trent, 466A, FD.72/X710, of Beefburgers with Onions and Gravy listed the ingredients in the wrong order, placing "Onions" second to "Rusk".

Steakettes, County 51 A/V, FD.72/1324, contained 76.0% of meat instead of the required minimum of 80% of meat and also contained 100 p.p.m. of undeclared Sulphur Dioxide Preservative.

### *Luncheon Meat*

Foreign matter in a can of Luncheon Meat, Aldridge-Brownhills, FC.72/151, consisted of a twisted fragment of tinned iron and had evidently resulted during the manufacture of the can.

The fat of another sample of canned Luncheon Meat, Newcastle-under-Lyme, FC.72/128, was very rancid, with a Peroxide Value of 167.

An unusual finding in a meat product was a live cartridge, such as is used in the captive bolt pistols in slaughter houses. Kidsgrove U.D.C., FC.72/81.

### *Meat in Pastry*

All the pies and puddings examined for meat content proved to be satisfactory, but a number of complaints concerning foreign matter, etc., were investigated.

## Contamination of Meat in Pastry

Description	Source	Lab. Ref.	Contamination
Meat & Potato Pie..	Aldridge-Brownhills U.D.C.	FC.72/64	Pencillium mould
Steak & Kidney .. Pie	„ „	118	Penicillium mould
Pork Pie .. ..	Cannock R.D.C.	155	Part of a moth
Meat Pie .. ..	Kidsgrove U.D.C.	112	Part of a feather
Steak & Onion Pie..	Lichfield R.D.C.	23	5/16in. B.S.W. Hex. bolt, 3/4in. in length
Sausage Roll ..	„ „	169	Penicillium and Cladosporium moulds
Pork Pie .. ..	„ „	263	Pig Bristles
Pork Pie .. ..	Newcastle-under- Lyme B.C.	202	Non-permitted blue dye
Pancake Roll ..	Rugeley U.D.C.	110	Putrifaction
Pork Pie .. ..	„ „	206	Penicillium mould
Meat & Potato Pie..	Stafford B.C.	88	Penicillium mould
Steak Pudding ..	Stoke-on-Trent	246	Iron wire

A Pork Pie, Stafford R.D.C., FC.72/233, that was submitted because the meat “looked grey” had been made with fresh meat and therefore lacked the pink colour of the cured meat that is commonly used in Pork Pie manufacture.

### *Poultry Products*

A Stuffed Chicken, Stafford B.C., FC.72/160, was contaminated by maggots and the query was raised as whether the maggots had come from the stuffing or whether there had been subsequent contamination. The maggots were identified as of the family Calliphoridae, which normally attack flesh foods, and were therefore from a subsequent contamination and not from the stuffing.

Part of a Cooked Chicken, Rugeley U.D.C., FC.72/244, which was thought to be abnormal, was considered to be satisfactory. A *small* amount of lung tissue and glandular tissue in the *interior* of the carcase being insufficient grounds for complaint.

Two samples of pre-packed Chicken in Jelly, Newcastle-under-Lyme B.C., 19, FC.72/X107, and Stoke-on-Trent, 418A, FD.72/X647, were deficient in meat, containing 72.6% and 78.0% respectively, instead of the required minimum of 80%.

A Roast Chicken Dinner, Rugeley U.D.C., FC.72/209, was contaminated by parts of a Crane Fly.

A Chicken and Mushroom Pie, Private, FC.72/132P, had attached to the upper surface parts of an insect known as a Winter Gnat (*Trichocera regelationis*).

Foreign matter in another Chicken and Mushroom Pie, Cannock R.D.C., FC.72/152, consisted of Sphagnum Moss – a substance commonly used in the preparation of mushroom beds.

A dead insect larvae on the surface of a Chicken and Ham Pie, Rugeley U.D.C., FC.72/228, was identified as that of the Mediterranean Flour Moth (*Ephestia kuhniella*).



The quality of seven eggs, Rugeley U.D.C., FC.72/166, was extremely variable. Two were graded as of second quality of fair internal quality and the remainder varied from “doubtful” to “rotten”.

FISH PRODUCTS

*Fish*

A complaint that fish that had only just been purchased was “off”, Private, FC.72/65P, was substantiated. The fish had an offensive odour and yielded Total Volatile Bases equivalent to 31mg of N per 100g of fish.

Fish and Chips, Rugeley U.D.C., FC.72/148, that was alleged to be abnormal had been fried in oil or fat that had deteriorated. The Peroxide Value of the extracted fat was 8.2 and which was close to the limit of acceptability.

Crystallised material, thought to be glass, in canned Salmon, Stafford B.C., FC.72/100, were identified as “Struvite” – magnesium ammonium phosphate – a harmless substance natural to fish.

*Fish Fingers*

The Annual Report for 1971 mentioned that the promise of a Statutory Standard for Fish Fingers had not materialised – nor did it in 1972. It is still awaited half-way through 1973!

Of the seven samples examined, four did not satisfy my proposed standard of a minimum of 65% of fish, and these included two which contained less than the 60% of fish which, it is understood, has been suggested by trade interests as a standard.

The samples examined were as follows:—

*Composition of Fish Fingers*

Source	Mark	Lab. Ref.	Fat Free Fish	Total Fat	Fish Content
			%	%	%
County ..	86 A/O	FD.72/401	64.0	8.0	65.0
„ ..	87 A/O	402	61.1	6.8	62.2
„ ..	87 B/L	656	60.0	6.3	61.0
„ ..	51 A/S	830	64.0	7.8	65.0
„ ..	52 A/S	831	64.0	7.0	65.0
„ ..	50 A/T	978	53.6	9.3	54.6
„ ..	51 A/T	979	51.3	9.0	52.3

It will be noted that the Fish Content is expressed as (Fat Free Fish +1%). This makes a slightly over generous allowance for the fat naturally present in the fish – the other fat comes from the frying process and is not “fish”.



## FRUIT AND FRUIT PRODUCTS

### *Fruit*

A product sold in a glass jar and labelled "Fresh Sliced Lemon" County 86 A/N, FD.72/169, contained 550 p.p.m. of Sulphur Dioxide preservative. The relevant entry in The Preservative in Food Regulations, 1962, stated Fruit (other than fresh fruit) – not exceeding 350 p.p.m. of Sulphur Dioxide. Thus if the sample were to be regarded as "fresh fruit" then it should not have any Sulphur Dioxide or alternatively if it was not described as "fresh" then it would have had too much preservative!

### *Dried Fruit*

Foreign matter in a packet of dates, County FC.72/106, was identified as a 40mm long bundle of green coloured cotton threads.

Ready Washed Sultanas, Lichfield City, FC.72/52, were thought to be dirty, but no dirt other than a small fragment of paper was found.

### *Preserves*

Foreign matter in a jar of Strawberry Jam, Leek U.D.C., FC.72/230, was identified as a natural vegetable fibre, probably sisal, 162mm in length.

A small fragment of wood was found in a jar of Marmalade, Stafford B.C., FC.72/235.

A housewife sought advice when she noticed that the bottle of pectin that she had used was "out-of-date". The sample of Blackcurrent Jam submitted, County 25 A/T, FC.72/168, was firmly set but contained 67.0% of soluble solids instead of the 68.5% required by law for jam which is to be sold in non-airtight containers and which is to ensure good keeping qualities.

A jar of home-made Apricot Jam, Stoke-on-Trent, FC.72/138, was alleged to have an unusual taste. The soluble solids in this case was only 62%. It also had a low acidity, 0.6% as citric acid, instead of the usual 1–2% and probably due to the use of over-ripe fruit.

It was suggested that the jam be re-boiled, with the addition of a small amount of Citric Acid.

### *Canned or Bottled Fruit*

Cocktail Cherries in Maraschino Flavoured Syrup, County 35 B/R, FD.72/1485, contained no Maraschino and the word *Flavoured* in the description should have been *Flavour*.

Canned Gooseberries in Heavy Syrup, County 57 A/N, FD.72/27, were from a can that showed excessive corrosion and contained 275 p.p.m. of Tin, which is in excess of the recommended limit of 250 p.p.m.

Canned Pears in Heavy Syrup, Lichfield City, FC.72/57, also showed excessive corrosion and contained not only 600 p.p.m. of Tin, but also 656 p.p.m. of Iron.

Foreign matter in Canned Pineapple Pieces, Rugeley U.D.C., FC.72/38, was identified as a female specimen of a variety of cricket, *Gryllus bimaculatus*, which is widely distributed in Africa, Asia and Southern Europe but not usually found in this country.

The end of a smoked cigarette was found in Apricot Halves, Lichfield R.D.C., FC.72/114.

Miscellaneous mineral and vegetable debris occurred in Canned Fruit Salad, Newcastle-under-Lyme R.D.C., FC.72/24. Also two fragments of a rubbery composition which appeared to be part of the sealing material from an end seam of the can.

Prunes in Syrup, County 11 A/S, FC.72/119, contained flakes of iron rust bearing traces of blue paint.

## OTHER FRUIT PRODUCTS

### *Fruit Juice*

Grapefruit Juice, County 10 A/L, FD.72/138, claimed the presence of "Vitamins" but did not state the nature or amounts of the vitamins, as is required by The Labelling of Food Order, 1953. The amount of Vitamin C present, 1.5mg/100g, was insufficient to justify the claim "Rich in Natural Vitamins".

Orange Juice, County 60 A/O, FD.72/166, was of the same brand as the above and offended in a similar manner.

Three samples of Canned Grapefruit Juice, Tamworth B.C., FC.72/35, FC.72/44 and Tutbury R.D.C., FC.72/47, were examined following a report in another County of illness due to tin caused by excessive corrosion of the cans. The first sample contained excessive amounts of Tin and Iron, 350 p.p.m. and 70 p.p.m. respectively, but the other two samples were satisfactory.

Grapefruit Juice packed in a glass jar, Tamworth B.C., FC.72/101, had a brownish discoloration and numerous crystals had formed of Naringin, the natural bitter principle of grapefruit. Both indications that it was of very old stock.

Orange Juice, Newcastle-under-Lyme B.C., FC.72/69, contained yeast cells and mould hyphae.

### *Liquid Pectin*

Two bottles of Liquid Pectin, County 24 A/T, FC.82/167, were submitted with reference to the Complaint sample of Blackcurrant Jam, 25 A/T, FC.72/168.

The pectin was considered to be satisfactory, but it was observed that the labels had been defaced so that the expiry date and the required list of ingredients was not present.

### *Lemon Cheese*

An unusual complaint concerned a sample of Lemon Cheese, Newcastle-under-Lyme B.C., FC.72/220, in that it had an 'odd' flavour. The sample proved to be Lemon Cheese as it used to be made years ago, instead of the modern highly coloured, flavoured and starch-thickened product. Some people are now so accustomed to substitute products that they even prefer them and complain about the real thing!

### *Fruit Pies*

An Individual Fruit Pie, Newcastle-under-Lyme B.C., FC.72/75, contained foreign matter comprising fragments of insects, vegetable matter, pollen grains and uric acid – which together add up to the excreta of a bird.



An Individual Apple and Blackcurrant Pie, Rugeley U.D.C., FC.72/102, was extensively contaminated by *Aspergillus glaucus* mould.

An Individual Gooseberry Pie, County 97 B/J, FC.72/172, was similarly contaminated by mould, mainly *Aspergillus glaucus* but also some *Penicillium*.

## VEGETABLES AND VEGETABLE PRODUCT

### *Vegetables*

The Tomato of a Cheese and Tomato Roll, Rugeley U.D.C., FC.72/11, was contaminated by growths of the moulds *Penicillium Cladosporium* and *Pleospora*.

A white powder on the leaves of a lettuce, Lichfield City, FC.72/92, was entirely inorganic and was identified as aluminium silicate. No pesticides were detected and it was considered that the powder was the residual inert filler of a non-persistent pesticide formulation.

Frozen Brussel Sprouts, Rugeley U.D.C., FC.72/225, contained an irregularly shaped piece of black Polythene sheeting and a small piece of paper.

### *Canned Vegetables*

Baked Beans in Tomato Sauce, Tamworth B.C., FC.72/10, were extensively contaminated by *Cladosporium* mould and *Candida* yeasts. A hole in one end of the can would have provided a means of entry for these organisms.

Two cans of Tomatoes, Rugeley U.D.C., FC.72/83, and FC.72/183, showed evidence of insect attack. The first contained two larvae, one of a lepidopterous insect – probably *Gnorimoschema operculella* – which is known to attack tomatoes, and also the larvae of a fly, probably *Cyclorrhaphous*. The second can contained a larvae of a similar fly.

Some Canned Tomatoes exhibited evidence of corrosion. Cannock U.D.C., FC.72/36, had a hydrogen 'swell' and contained 195 p.p.m. of Tin and 320 p.p.m. of Iron – the internal lacquer on the can had broken down. Tamworth B.C., FC.72/45 (Two Cans), contained 180 p.p.m. Iron and 200 p.p.m. Tin and 90 p.p.m. of Iron and 350 p.p.m. of Tin respectively. Tamworth B.C., FC.72/73 had 9 p.p.m. of Iron and 134 p.p.m. of Tin.

Canned Carrots, Stoke-on-Trent, FC.72/236, had deteriorated through the entry of spoiling organisms through a cut in the body of the can. Another example of the unwise use of a sharp instrument in opening cardboard cartons of cans.

Two Cans of Peas, Newcastle-under-Lyme B.C., FC.72/238, contained only 74g and 66g respectively, of peas – the rest being liquid and evidently due to some fault with the filling machinery.

## OTHER VEGETABLE PRODUCTS

### *Dried Soup*

Dried Soup, County 79 B/V, FD.72/1669, did not have the required list of ingredients. The labelling indicated that it was packed for the catering trade, for which there are certain labelling exceptions, but it had been sold retail.



### *Vegetable Juice*

Cocktail Vegetable Juice, County 72 A/L, FD.72/393, claimed the presence of Vitamins A and C but did not state the amounts, as is required.

### *Potato Crisps*

Potato Crisps, Rugeley U.D.C., FC.72/37, were contaminated by cotton fibres.

Another sample, Aldridge-Brownhills, FC.72/140, contained one complete and ten fragments of insects – either firebrats (*Thermolia domestica*) or silver fish (*Lepisma saccharina*).

Potato Crisps, Cannock R.D.C., FC.72/261, which had a blue-purple discoloration were considered satisfactory – the colour being a characteristic of a certain variety of potato.

## SUGAR AND SUGAR PRODUCTS

### *Sugar*

Foreign material alleged to have been found in a bag of Sugar, Private, FC.72/67P, was identified as a fragment of aluminium metal.

### *Sugar Confectionery*

Dairy Butter Toffees, County 49 A/P, FD.72/488, contained only 3.2% of butter fat, instead of the required minimum of 4.0%.

Milk Chocolate Chewing Nuts, County 8 A/O, FD.72/86, had only 1.4% of butter fat in the chocolate coating. Chocolate made with whole milk would contain at least 3% of butter fat.

Cake Decorations, County 93 B/D, FD.72/368, were found not to consist of sugar confectionery but of chopped nuts. It was considered that “Cake Decoration” was not an appropriate designation for the purposes of The Labelling of Food Regulations, 1953.

Foreign matter found in Sugar Confectionery comprised: a stout bristle, such as is used in brushes and brooms, in a Boiled Sweet, Newcastle-under-Lyme B.C., FC.72/54; part of the filter tip of a cigarette in “Tea Cakes”, Rugeley R.D.C., FC.72/157; a splinter of wood in Chocolate, Rugeley U.D.C., FC.72/240.

### *Medicinal Confectionery*

The dividing line between sugar confectionery and a medicinal product is not only not clear, but also on occasions somewhat bent.

The classification of these products for the purposes of The Medicines Act, 1968, is now under active consideration in view of the licensing requirements of the Act.

Two samples of Love Potion, County 43 B/O, FD.72/1210, 44 B/O, FD.72/1211, consisted only of sugar, coloured with cochineal and flavoured with aniseed. It was considered that the designation was more a recommendation as a medicine than as a food and would, therefore, have to be marked with a quantitative list of the active ingredients, in accordance with the requirements of The Pharmacy and Medicines Act, 1941.

Similar consideration was considered to apply to Cough Candy Drops, County 61 A/T, FD.72/1218, and Koff Candy, County 43 A/U, FC.72/1303.

## *Sugar Substitutes*

Three samples of the same Brand of Low Calorie Sweetener, County 51 B/P, FD.72/990, 26 B/Q, FD.72/1067 and Stafford BC. 1332, FD.72/X578, were criticised because of labelling irregularities. It consisted of 98% Sucrose, 1.85 Glucose and 0.15% Saccharin Sodium and could not, therefore, be described as “Low Calorie” since the calorific value was practically identical to that of Sucrose. The description referred also to its “natural sweetness” whereas Saccharin is an artificial sweetener. There was also a reference to a saving of “fattening calories” which was an absurdity since “calories” are a measure of energy, and food consumed in providing energy could not possibly be converted into fat.

The manufacturers have now revised this labelling.

## OILS AND FATS.

A sample of Dripping, Cannock U.D.C., FC.72/198, had deteriorated. Peroxide rancidity was present, the Peroxide Value varying from 17 at the centre to 230 near the surface of the block.

## BABY FOODS

### *Milk Based*

Three samples of Milk Based Baby Foods, Cannock U.D.C., FC.72/31, Newcastle-under-Lyme B.C., FC.72/55 and Private, FC.72/254P, were examined as a result of complaints of abnormality. All three samples were satisfactory. In one case it was alleged that the milk curdled when it was prepared – it *could* be made to curdle, but was perfectly satisfactory when made up in accordance with the manufacturers directions.

### *Cereal Based*

Live insects in a packet of “Mixed Cereal”, County FC.72/33, were identified as Spider Beetles, *Ptinus Tectus*.

Foreign matter in another product, Lichfield R.D.C., FC.72/181, was found to be a “flake” of material of the same composition as the food and was evidently a manufacturing fault.

### *Meat Based*

Penicillium mould in a can of Beef Broth with Barley, Cheadle R.D.C. FC.72/241, had evidently gained access to the interior of the can through a slit in the body of the can. Yet another example of the damage caused by the careless use of a knife in opening a carton of cans.

A single textile fibre 12mm in length was found in a jar of Braised Liver Dinner, Private, FC.72/165P.

A wood louse, alleged to have been found in a can of Beef Dinner, Newcastle-under-Lyme B.C., FC.72/255, had not been subjected to heat and must, therefore, have gained access to the can after it had been opened.

## BEVERAGES

### *Tea*

A packet of Tea, County 47 A/L, FD.72/1313, was contaminated by *Aspergillus* mould.



A residue found in the bottom of a plastic beaker taken from the *tea* section of a vending machine, County 78 A/M, FC.72/5, was found to consist of *coffee*. It was evident that a discarded used beaker had been put back into the machine for re-use. Perhaps it would be a good idea for customers to crush or otherwise deform their used beakers before discarding them to prevent the possibility of such ‘mistakes.’

*Coffee.*

Viennese Coffee, County 88 A/Q, FD.72/560, was not labelled in the manner required by The Coffee and Coffee Product Regulations 1967.

FERMENTATION PRODUCTS

*Beer*

A bottle of liquid supplied when Lager was requested, County 79 B/N, FD.72/738, contained only 1.1 % of Proof Spirit and was not, therefore, Lager. The style and labelling of the bottle was similar to that of genuine Lager but the word “Lager” was not present. Also it was declared as “under 2° proof”.

Three bottles of Light Ale of different Brands, Rugeley FC.72/12; Newcastle-under-Lyme B.C., F.C 72/248 and County B/R, FC.72/258, were contaminated by mould. The first two by Cladosporium and the third by Cladosporium and Penicillium.

*Shandy*

Six, out of fifteen samples of Shandy contained less than 1.5 % of Proof Spirit and were, therefore, the subject of adverse reports.

These samples were:

Source	Description	Mark	Lab. Ref.	Proof Spirit
County .. ..	Shandy	67 A/O	FD.72/198	% 1.2
” .. ..	”	64 B/N	709	1.3
” .. ..	”	64 B/O	1521	0.7
” .. ..	”	1 B/W	1625	1.4
” .. ..	”	12 B/W	1646	1.3
Cannock U.D.C. ..	”	29/72	X325	0.8

Enforcement Authorities have been reluctant to take action on Shandy because of an adverse Judgement in a Magistrates Court – deciding to “hold their fire” until the standard of not less than 1.5 % became Statutory with the coming into force of The Labelling of Food Regulations 1970 on 1st January, 1973.

*Pickles etc.*

A sample described as ‘Vinegar’, Newcastle-under-Lyme B.C. 70, FD.72/X441, was simply a 5.1 % solution of acetic acid coloured with caramel. It should not have been described as ‘Vinegar’ and the list of ingredients should have included the ‘Caramel’ used to colour the product.

Insoluble matter in Malt Vinegar, Stoke-on-Trent 44A, FD.72/X62, consisted of bacteria, yeast, fragments of mites and miscellaneous debris including textile fibres.



Tomato Relish, County 64 B/D, FD.72/254, contained only 3% of Tomato Solids instead of the minimum of 6% required by The Food Standard (Tomato Ketchup) Order 1949. The manufacturers regarded this product as a Tomato Pickle but had not appreciated that in their search for a name for their product they had picked a description that was a recognised synonym for Tomato Sauce.

Mayonniase of Continental origin, Cannock U.D.C. 21/72, FD. 72/X298, was of very satisfactory composition in that it contained 80% of oil and 10% of Egg Yolk but the required list of ingredients put these two items in the reverse order.

A product described as Mushroom Ketchup, County 35 B/A, FD. 72/1132, was not, in fact, Mushroom Ketchup but a substitute made with hydrolised animal protein flavoured with a little powdered mushroom.

Foreign matter alleged to have been found in a bottle of Tomato Ketchup Private, FC.72/63P, was identified as part of a green bottle fly or cluster fly, (*Dasyphora Cyanella*). It had not been subjected to heat and it was therefore improbable that it could have been in the sauce during the process of manufacture.

A complaint of the flavour of a Tomato Sauce, County 17 B/K, FC.72/42, was attributed to a somewhat higher vinegar content than the average.

Salad Cream, Rugeley U.D.C., FC.72/77, was discoloured and the flavour had deteriorated. There was no evidence of contamination, however, and it was concluded that it was from old stock.

Alleged foreign matter in a bottle of Sauce, Lichfield R.D.C., FC.72/82, was of the nature of "mother of vinegar", a name for the vinegar – forming bacteria sometimes found in vinegar. Sauces are usually heat treated to prevent such growths and the treatment had probably been insufficient in this instance.

A splinter of wood some 36mm in length was found in a carton of Spanish Salad. Lichfield City, FC.72/34.

A jar of Sweet Pickle, County 15 A/L, FC.72/84, was submitted with the complaint that it was fermenting. Numerous small bubbles were, in fact, present but these had resulted from the use of a vacuum seal to the jar causing dissolved air to form visible bubbles.

When the vacuum was broken by removing the lid the bubbles instantly disappeared.

### *Brewing Materials*

The present interest in home brewing has brought onto the retail market a number of commodities sold under names familiar to the brewing trade. It has not always been appreciated by the manufacturers, and their retail outlets, that such materials are regarded as foods for the purposes of the Food and Drugs Act by virtue of their being used for the preparation of Beer. Beer being regarded as a Food.

Three such samples were not correctly described or correctly labelled.

"Yeast Starter", County 58 B/D, FD. 72/248, was a compound containing Sucrose, Reducing Sugars, Ammonium Salts and Phosphates and should have been marked with a list of ingredients.

Blackcurrent Flavour Concentrate, County 61 B/D, FD.72/251, contained added colouring matter, Red 10B, and could not, therefore, claim exception as a flavour from the requirement to be marked with a list of ingredients.

Heading Liquid. County 62 B/D, FC.72/257, contained 4,000 p.p.m. of Sulphur Dioxide preservative – which would be permitted for a sale to a manufacture, but not for a sale by retail.

#### SOFT DRINKS

Orange Crush, Newcastle-under-Lyme B.C. 95, FD.72/X615, was sold in a one pint bottle marked “Pasteurised Milk” but with the words “Orange Crush” on the metal foil cap.

The composition complied with the requirements of The Soft Drinks Regulation 1963 but the presence of Saccharin had not been declared. There seems to be a curious but mistaken idea that if something, other than milk, is sold in a milk bottle, that it becomes exempt from the requirements of the laws which apply to normal containers.

An article supplied when Concentrated Orange Juice was requested, Stafford B.C., 1300, FD.72/X328, was a concentrated orange drink and was labelled as such.

A similar situation was Low Calorie Orangeade Concentrate, supplied when Low Calorie Orange Concentrate was requested, County 42 B/N, FD.72/646.

Orange and Lemon Ice Lollies, County 77 B/V, FD.72/1667, contained no significant amount of fruit.

Soda Water in a “Syphon” County 11 A/P, FC.72/53, contained an earwig (Forficular Auricularia). Contrary to popular opinion these “syphons” have immovable tops and cannot, therefore, be washed before refilling. They are refilled by forcing soda water up the “spout” and any foreign matter lodged in the spout is thus forced into the interior. Earwigs are well known for their liking of dark places and the spout of a carelessly stored Soda Water Syphon would seem to be a highly desirable residence.

Lemonade, Stafford B.C., FC.72/127, that was slightly turbid and of a slightly brownish-pink colour contained vegetable debris and the permitted artificial dye Amaranth, indicating that the bottle had previously contained a different kind of soft drink and had been refilled without adequate washing.

Foreign matter from a bottle of Lemonade, Stafford B.C., FC.72/194, was identified as mould.

Foreign matter in another bottle of Lemonade, County 31 B/W, FC.72/262, was identified as asbestos fibres. Possibly from a filter used at the factory.

Lemonade thought to taste “odd”, County 99 B/D, FC.72/76, contained only carbonated water.

An insect larva in a bottle of Low Calorie Orange Drink, Lichfield R.D.C., FC.72/211, was identified as that of a Sawfly.

A bitter flavour in an Orange Ice Lollie, Cannock U.D.C., FC.72/204, was found to be due to the presence of Calcium Chloride. Calcium Chloride solution is used in the freezing plant for making ice lollies and some had evidently leaked into the freezing container for the ice lolly.



## SPICES, FLAVOURINGS ETC.

Prepared Table Salt, County 82 A/P, FD.72/939, consisted of 99.2 % of salt and 0.8 % Magnesium Carbonate. The label, however, stated that it contained *either* Magnesium Carbonate or Calcium Phosphate, but the Labelling requirements do not permit alternatives.

## REMEDIAL FOODS

Savoury Beef Diet Biscuits, County 54 A/S, FD.72/833, contained no beef meat and the only association with meat was "Meat Extract", as a very minor ingredient. It should have been described as "Beef Flavour".

## DRUGS

Indian Brandee, a popular remedy in some parts, and of somewhat variable composition suddenly demanded close attention when complaints of a burning taste were received. County 81 B/F, FC.72/22, 82 B/F, FD.72/85 and Cannock U.D.C., FC.72/3.

All these samples were found to contain 6 % of Tincture of Capsicum instead of the 2.7 % declared and the flavour was certainly very "hot".

## IMPORTED FOOD REGULATIONS 1968

Under these Regulations the normal examinations of a food at the Port of Entry can be deferred, under certain circumstances, until the food arrives at its final destination in this Country. The Local Authority then has to arrange for the necessary examinations to be made. It is curious, however, that the required examination is limited to the fitness or otherwise of the food for human consumption, and while this does include such matters as excessive, or non-permitted, preservatives, and a search for non-permitted colours, the Regulations are not, as such, concerned with the finer points of U.K. food legislation.

A food could be certified as fit and yet be substandard as regards its composition.

When samples of imported foods are received it has, never-the-less, been policy to advise upon such other matters, including labelling.

A Milk Substitute, Stoke-on-Trent, 499A, FD.X757, was considered to be satisfactory.

A trial consignment of Meat Products were fit for use but the description and labelling left much to be desired.

Beefsticks, County 10 B/S, FD.72/1204, were made from cured beef and not from fresh beef as claimed. They were described also as "Bread-crumbed" but were as naked as the day they were born.

Noodle Cakes, County 11 B/S, FD.72/1205; Meat and Vegetable Croquettes, County 12 B/S, FD.72/1206; Rice Cakes, County 13 B/S, FD.72/1207 and Croquette Balls, County 14 B/S, FD.72/1208, also contained cured instead of fresh meat and added artificial colour (Tartrazine) had not been declared.



PESTICIDE RESIDUES

The third Survey of Pesticide Residues in Food, sponsored by the Local Authority Associations, was carried out in 1972.

It will be some time before the results obtained from the whole Country will be available, but the following is a summary of the results for 57 samples from Staffordshire.

Sample	Source	Mark	Lab. Ref.	Pesticide
<i>Dairy Products:</i>				
Milk .. ..	County	64 B/K	FD.72/357	B.H.C. (Trace)
" .. ..	"	19 A/Q	FD.72/470	B.H.C. (0.002 p.p.m.)
" .. ..	"	7 B/P	FD.72/676	B.H.C. (0.002 p.p.m.)
" .. ..	"	60 A/U	FD.72/1333	B.H.C. (0.005 p.p.m.)
" .. ..	Stoke-on-Trent	120A	FD.72/X199	B.H.C. (Trace)
Butter .. ..	County	77 A/O	FD.72/208	B.H.C. (0.027 p.p.m.)
" .. ..	"	83 A/T	FD.72/1278	Not detected
Cheese (Parmesan) ..	County	78 A/O	FD.72/209	D.D.T. (Trace)
" (Cream) ..	"	5 B/P	FD.72/674	Dieldrin (Trace)
" (Soft) ..	"	4 B/V	FD.72/1423	Mercury (0.014 p.p.m.)
" (Cheddar) ..	"	5 B/V	FD.72/1424	B.H.C. (0.065 p.p.m.)
" (Brie) ..	Cannock U.D.C.	2	FD.72/X260	Dieldrin (Trace)
" (Soft) ..	Stoke-on-Trent	424A	FD.72/X653	B.H.C. (0.021 p.p.m.)
<i>Cereal Products:</i>				
Bread (Wholemeal)	County	6 A/S	FD.72/629	Dieldrin (Trace)
<i>Meat Products:</i>				
Lamb .. ..	County	43 B/L	FD.72/293	B.H.C. (Trace)
" .. ..	"	6 B/P	FD.72/675	B.H.C. (Trace)
" .. ..	"	81 A/T	FD.72/1276	D.D.T. (Trace)
Sausage (Beef) ..	Cannock U.D.C.	1	FD.72/X259	Dieldrin (Trace)
" (Pork) ..	Stoke-on-Trent	425A	FD.72/X654	B.H.C. (0.016 p.p.m.)
<i>Poultry Products:</i>				
Eggs .. ..	County	10 A/S	FD.72/741	Dieldrin (Trace)
<i>Fish:</i>				
Codling .. ..	County	61 B/L	FD.72/345	D.D.E. (Trace)
Cod .. ..	"	12 A/Q	FD.72/463	Not detected
" .. ..	"	9 A/S	FD.72/740	B.H.C. (0.012 p.p.m.)
Herring .. ..	"	42 B/P	FD.72/791	Dieldrin (Trace)
Shrimp .. ..	"	43 B/P	FD.72/792	Endrin (Trace)
Mussels .. ..	"	6 B/V	FD.72/1472	D.D.E. (Trace)
White Fish .. ..	"	1 B/V	FD.72/1410	B.H.C. (Trace)
Cod .. ..	Stafford B.C.	2	FD.72/X507	Mercury (Trace)
Mussels .. ..	Stoke-on-Trent	121A	FD.72/X200	Mercury (0.084 p.p.m.)
<i>Fruit:</i>				
Pears .. ..	County	62 B/L	FD.72/346	Mercury (0.030 p.p.m.)
" .. ..	"	22 A/T	FD.72/936	Mercury (0.052 p.p.m.)
Apples .. ..	"	23 A/T	FD.72/937	D.D.T. (0.026 p.p.m.)
" .. ..	"	2 B/V	FD.72/1421	B.H.C. (Trace)
Pears .. ..	Stoke-on-Trent	380A	FD.72/X560	Mercury (0.042 p.p.m.)
<i>Vegetables:</i>				
Celery .. ..	County	76 A/O	FD.72/207	Mercury (0.027 p.p.m.)
Turnips .. ..	"	63 B/L	FD.72/347	B.H.C. (Trace)
Lettuce .. ..	"	2 A/Q	FD.72/441	Copper (6.7 p.p.m.)
				Not detected
				B.H.C. (Trace)
				Thiocarbamates (Trace)

Sample	Source	Mark	Lab. Ref.	Pesticide
<i>Vegetables:—continued</i>				
Watercress .. ..	..	3 A/Q	FD.72/442	B.H.C. (Trace)
Mushrooms .. ..	..	22 B/P	FD.72/710	D. .T. (0.056 p.p.m.)
Lettuce .. ..	..	40 A/T	FD.72/964	B.H.C. (Trace)
.. ..	..	8 B/S	FD.72/1182	Not detected
.. ..	..	9 B/S	FD.72/1183	PCNB (Trace)
Tomatoes .. ..	..	3 B/V	FD.72/1422	Not detected
Celery .. ..	..	86 A/T	FD.72/1555	Copper (0.10 p.p.m.)
Turnips .. ..	..	87 A/T	FD.72/1556	B.H.C. (Trace)
Mushrooms .. ..	..	88 A/T	FD.72/1589	B.H.C. (Trace)
Watercress .. ..	..	89 A/T	FD.72/1650	P.C.N.B. (Trace)
Lettuce .. ..	Stoke-on-Trent	427A	FD.72/X656	Not detected
<i>Oils and Fats:</i>				
Sunflower Oil ..	County	79 A/O	FD.72/228	D.D.T. (Trace)
Lard .. ..	..	80 A/O	FD.72/229	D.D.T. (0.08 p.p.m.)
.. ..	..	..	..	B.H.C. (0.12 p.p.m.)
.. ..	..	..	..	Dieldrin (Trace)
Cooking Oil ..	..	82 A/T	FD.72/1277	Not detected
Lard .. ..	..	84 A/T	FD.72/1279	B.H.C. (0.014 p.p.m.)
.. ..	..	..	..	T.D.E. (0.037 p.p.m.)
.. ..	..	..	..	Dieldrin (Trace)
.. ..	..	..	..	D.D.E. (Trace)
Suet .. ..	Stoke-on-Trent	426A	FD.72/X655	B.H.C. (0.032 p.p.m.)
.. ..	..	..	..	Dieldrin (0.012 p.p.m.)
<i>Infant Foods:</i>				
Stained Apple & Prune Custard ..	County	7 A/S	FD.72/630	D.D.T. (0.050 p.p.m.)
Strained Roast Lamb & Vegetables ..	..	8 A/S	FD.72/631	Not detected
Canned Baby Food ..	Stafford B.C.	1	FD.72/X506	B.H.C. (0.006 p.p.m.)
Strained Beef & Vegetable Broth ..	Stoke-on-Trent	381A	FD.72/X561	Not detected

N.B. In the above table “trace” means that the pesticide in question was detected but that the amounts present were less than the following arbitrary reporting levels.

*Liquid Milk and Infant foods*

D.D.T. .. .. .	0.010 p.p.m.
Other Organo-Chlorine Compounds ..	0.002 p.p.m.

*Other Foods*

D.D.T. .. .. .	0.020 p.p.m.
Other Organo-Chlorine Compounds ..	0.010 p.p.m.
Organo-Phosphorus Compounds ..	0.050 p.p.m.
Chlor-Nitro Compounds .. ..	0.020 p.p.m.
Dithiocarbamates .. ..	0.500 p.p.m.
Mercury .. ..	0.010 p.p.m.
Copper .. ..	0.100 p.p.m.

Of the 57 samples, 45 or 79%, had detectable amounts of pesticides and 31 or 54%, had amounts of pesticides above the arbitrary reporting level.

A direct comparison between this and previous Surveys is not easy because the range of foods was not identical and the arbitrary reporting limits were more stringent than in previous Surveys.

By applying the criteria of the 1966-1967 and the 1967-68 Surveys to the 1972 Survey, however, it is evident that there has been some increased incidence of Pesticide Residues in food, from about 21 % in the 1966-1967 Survey to approximately 25% in the 1972 Survey (calculated on the 1966-1967 basis).

Although the proportion of foods containing such residues has increased, there has been a definite improvement in the overall position. Aldrin disappeared from the scene in 1972 and the related Dieldrin was much less in evidence.

When a 'mean level' for all samples is calculated, by assuming that samples containing amounts less than the arbitrary reporting level contain half that amount, it is possible to compare foods that were common to all three Surveys. In figure 1 the mean levels in foods examined by Public Analysts in the Midlands are compared against the National means for the first two surveys. These results show that, except for Tomatoes and Sausages, the amounts of Pesticides present has either remained static or has decreased – in some foods the reduction has been quite considerable

In no case can the amount of Pesticide found in any one sample be considered to be excessive.

The widening of the 1972 Survey to include a search for Mercury in Fish was a consequence of the finding of excessive amounts of Mercury in some samples of Tuna fish. Every sample of fish examined in the County Laboratory and included in the 1972 Survey, was found to contain Mercury but the highest amount found – 0.084 p.p.m. in a sample of Codling, was considerably below the U.S.A. limit of 0.5 p.p.m. and the average of 0.3 p.p.m. for Tuna fish reported by The Government Laboratory in 1970.

It is, never-the-less, important that this work of monitoring by Public Analysts for such contaminants should continue – a view which has been endorsed by the Food Additives and Contaminants Committee of The Ministry of Agriculture, Fisheries and Food in March, 1973 when considering the Third Report of a Working Party on the Monitoring of Foodstuff for Heavy Metals (A Survey of Mercury in Food, A Supplementary Report).



# PESTICIDES IN FOODS

MEAN LEVELS  
(from three surveys)

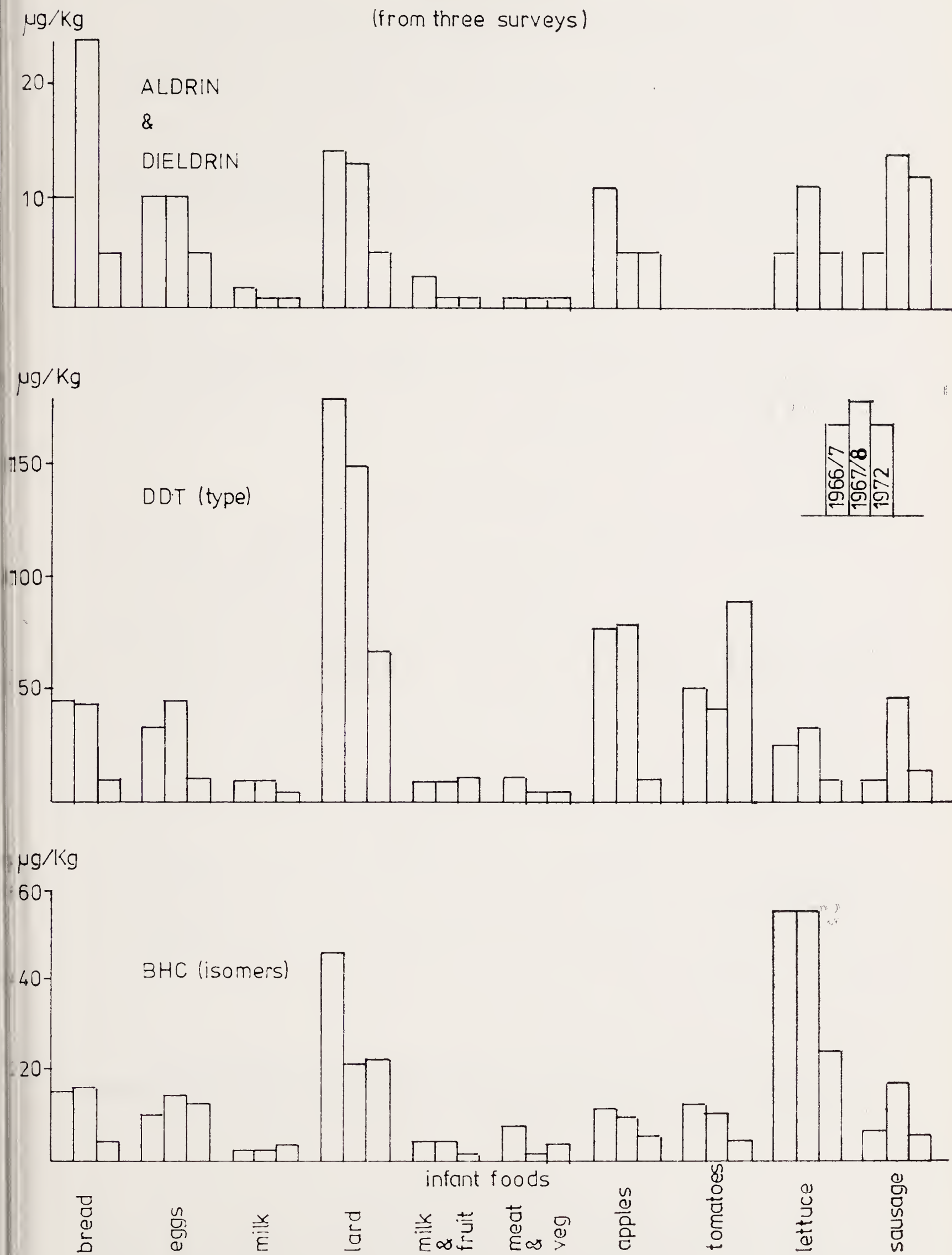


Fig 1

## SECTION III

### FERTILISERS AND FEEDING STUFFS ACT, 1926

130 Samples, 116 from the County Council and 14 from Stoke-on-Trent, were submitted by Inspectors under the Act, of these samples 14 Fertilisers and 19 Feeding Stuffs were irregular.

The irregular samples, included 16 that had variations that were to the prejudice of the purchaser (12.3% of all samples) and also 5 that were sold without Statutory Statements or with Statements that were not in the prescribed manner (3.8% of all samples).

Particulars of the samples are given in the following tables:—

(It should be noted that the total of irregularities in the table exceeds the number of irregular samples as some samples were irregular in more than one aspect).

#### SAMPLES EXAMINED

	County Council				Stoke-on-Trent			
	Irregularities				Irregularities			
	No.	Excess	Deficient	Others	No.	Excess	Deficient	Others
<i>Fertilisers:</i>								
Basic Slag .. ..	1	—	—	1	2	—	—	—
Bone Meal .. ..	1	—	—	—	—	—	—	—
Compounds .. ..	27	10	10	—	6	—	—	—
Dried Blood .. ..	1	—	—	1	—	—	—	—
Lime .. ..	1	—	—	—	—	—	—	—
Nitro Chalk .. ..	2	—	—	—	—	—	—	—
Nitrate of Soda .. ..	2	—	—	—	—	—	—	—
Steamed Bone Meal ..	2	1	2	—	—	—	—	—
Sulphate of Ammonia ..	2	—	—	—	—	—	—	—
Sulphate of Potash ..	2	—	—	—	—	—	—	—
Superphosphate ..	1	—	—	—	—	—	—	—
	42	11	12	2	8	—	—	—
<i>Feeding Stuffs:</i>								
Compounds .. ..	64	6	4	2	6	3	—	1
Concentrates .. ..	4	—	1	—	—	—	—	—
Mollassed Feeds ..	6	—	2	—	—	—	—	—
	74	6	7	2	6	3	—	1

#### SAMPLES FROM OTHER SOURCES

In addition to the above, 7 samples of Feeding Stuffs were submitted privately for compositional analysis.

#### IRREGULAR SAMPLES

In the following tables, the 'excesses' and 'deficiencies' are the actual variations from the amounts given in the Statutory Statements. Only those samples are included, in which the variations exceeded the permitted limits of variations.

# FERTILISERS

Authority and Description			N	P <sub>2</sub> O <sub>5</sub>				K <sub>2</sub> O	Others	Irregularity
				Total	Sol- uble	Insol- uble	Cit- ric			
			%	%	%	%	%	%		
B.1258	John Innes Liquid Feed	S	18.65	—	6.2	—	—	6.2	—	Phos. Acid. Sol. in Water 1.1% excess Potash 2.6% def.
		F	17.0	—	8.3	—	—	3.6	—	
A.263	Compound Fertiliser John Innes Base	S	5.1	—	7.2	0.5	—	10.0	—	Nitrogen 1.9% excess Phos. Acid Sol. in water 1.7% def. Phos. Acid Insol. in water 2.4% excess Potash 3.7% def.
		F	7.0	—	5.5	2.9	—	6.3	—	
B.1261	10-10-18 Fertiliser	S	10.0	—	9.5	0.5	—	18.0	—	Nitrogen 1.6% def. Potash 3.3% excess
		F	8.4	—	8.5	1.0	—	21.3	—	
B.1262	5-17-17 Fertiliser	S	5.0	—	16.0	1.0	—	17.0	—	Nitrogen 0.7% excess
		F	5.7	—	15.4	1.0	—	16.4	—	
B.1265	Liquid Feed John Innes	S	18.65	—	6.2	—	—	6.2	—	Phos. Acid Sol. in Water 2.4% def.
		F	18.6	—	3.8	—	—	6.4	—	
B.1268	Basic Slag	S	—	13.0	—	—	12.0	Fineness (BS Sieve No. 100)	—	No declaration of the amount of the article that will pass through a British Standard Test Sieve Mesh No. 100
		F	—	13.8	—	—	12.8		6.0	
A.273	Grass Feeder	S	16.5	—	6.85	—	—	2.7	—	Phos. Acid Sol. in Water 0.95% excess
		F	16.9	—	7.8	—	—	2.6	—	
A.274	Dried Blood	S	11/13	—	—	—	—	—	—	The Statutory Statement was no in the manner required
		F	11.8	—	—	—	—	—	—	
A.276	Steamed Bone Meal	S	1.0	29.0	—	—	—	—	—	Nitrogen 1.3% excess Phos. Acid 2.1% def.
		F	2.3	26.9	—	—	—	—	—	
A.277	Steamed Bone Meal	S	1.0	29.0	—	—	—	—	—	Phos. Acid 2.5% def.
		F	1.5	26.5	—	—	—	—	—	
B.1272	10-15-10 Fertiliser	S	10.0	—	13.8	1.2	—	10.0	—	Phos. Acid Sol. in water 2.0% def. Potash 3.9% excess
		F	10.0	—	11.8	1.0	—	13.9	—	
B.1277	Lawn Fertiliser	d	5.0	—	6.0	4.0	—	2.0	Iron 1.0 1.0	Phos. Acid Sol. in Water 1.3% def. Potash 1.3% excess
		F	5.4	—	4.7	4.5	—	3.3		
B.1278	Chrysan- themum Plant Food	S	5.0	—	3.64	6.60	—	4.73	—	Phos. Acid Sol. in Water 1.24% def.
		F	5.5	—	2.4	6.9	—	5.0	—	
B.1281	Compound Fish Manure	S	4.0	—	6.0	1.5	—	5.0	—	Nitrogen 2.0% excess Phos. Acid Sol. in Water 3.4% def. Phos. Acid Insol. in Water 1.3% excess Potash 1.3% def.
		F	6.0	—	2.6	2.8	—	3.7	—	

In the above table, the 'excesses' are to the advantage and the 'deficiencies' are to the prejudice of the purchaser.



# FEEDING STUFFS

Authority and Descriptions			Oil	Pro- tein	Fibre	Others	Irregularities
			%	%	%	%	
<i>County Council:</i>							
A.250	Feeder Meal	S	2.5	12.5	6.5	—	Protein 2.1 % excess
		F	2.4	14.6	3.9	—	
A.252	Layers Pellets	S	3.0	15.0	5.0	—	Protein 2.1 % excess
		F	2.8	17.1	3.5	—	
A.271	Sheep Breeder Feed	S	2.3	14.1	3.6	—	Protein 1.8 % excess
		F	2.4	15.9	4.0	—	
B.1269	Mollassed Meal	S	—	—	11.5	Sugar 30.0 26.7	Sugar 3.3 % deficient
		F	—	—	12.1		
A.291	Calf Weaning Pellets	S	3.0	18.5	4.0	—	Oil 1.4 % excess
		F	4.4	20.0	3.8	—	
A.293	High Protein Meal	S	4.5	34.0	6.0	—	Protein 7.0 % deficient
		F	3.9	27.0	6.6	—	
A.296	Super Creep Pellets	S	2.5	18.0	3.5	Copper 250 p.p.m. Copper 288 p.p.m.	Oil 1.0 % excess
		F	3.5	18.0	2.8		
A.300	Pig Growers	S	4.0	18.5	3.5	Copper Copper 245 p.p.m.	No declaration of the amount of Copper
		F	3.5	17.4	2.6		
A.301	Pig Growers	S	2.5	15.0	6.0	Copper Copper 180 p.p.m.	No declaration of the amount of Copper
		F	2.6	13.7	4.6		
A.308	Intensive Layers Mash	S	3.0	17.0	5.0	—	Oil 1.5 % excess
		F	4.5	17.3	5.5	—	
B.1282	Compound with Molasses	S	—	20.0	12.0	Protein Equiv. of Urea 12.0 Sugar 25.0 Urea 9.6 Sugar 25.0	Protein total 2.6 % deficient
		F	—	17.4	12.1		
B.1285	Molassed Meal	S	—	—	—	Sugar 30.0 Sugar 24.6	Sugar 5.4 % deficient
		F	—	—	—		
B.93	Layers Mash	S	3.0	18.0	3.0	—	Protein total 3.8 % deficient
		F	2.3	14.2	3.2	—	
B.94	Rearer Pig Meal	S	2.6	16.9	4.9	Copper 165 p.o.m. Copper 130 p.p.m.	Protein total 2.5 % deficient
		F	2.8	14.4	4.9		
A.320	Cutter Meal	S	2.5	15.0	6.0	Copper 200 p.p.m. Copper 10 p.p.m.	Copper 190 p.p.m. deficient
		F	3.2	15.5	6.2		
<i>City of Stoke-on-Trent:</i>							
7F	Baby Chick Mash	S	4.5	17.0	3.0	—	Fibre 1.9 % excess To the prejudice of the purchaser
		F	5.2	17.5	4.9	—	
8F	Battery and Intensive	S	4.0	16.0	5.0	—	Oil 1.4 % excess
		F	5.4	15.3	4.9	—	
9F	Pig Cutters	S	2.25	16.0	5.0	Copper Copper 150 p.p.m.	No declaration of the amount of Copper
		F	2.3	15.2	4.9		
12F	Medium Hybrid	S	4.0	16.0	5.0	—	Oil 1.1 % excess
		F	5.1	15.0	5.1	—	

In the table above, the ‘excesses’ are to the advantage and the ‘deficiencies’ are to the prejudice of the purchaser except where stated to the contrary.

## SECTION IV

### CONSUMER PROTECTION ACT, 1961

#### The Toys (Safety) Regulations, 1967

Of the 40 samples submitted, 6 failed to meet the requirements of the Regulations with respect to the amount of toxic metals in the paint. A failure rate of 15%, five years after the Regulations were made cannot be considered a satisfactory situation. Three of the offending samples were of childrens' paint brushes, which were almost certain to be sucked or chewed.

Details of the unsatisfactory samples are as follows:—

Toy	Source	Mark	Lab. Ref.	Colour	Irregularity
Grand Piano .. ..	Stoke-on-Trent	—	CP.72/3	Red	Lead 80,000 p.p.m.
Circus and Zoo Animals .. ..	County	T39(A)	CP.72/5	Red Brown	Lead 9,000 p.p.m. Lead 30,000 p.p.m.
Grand Piano .. ..	Stoke-on-Trent	—	CP.72/7	Orange- Red Crimson- Red	Lead 100,000 p.p.m. Lead 60,000 p.p.m.
Paint Brushes .. ..	County	T44(A)	CP.72/14	Green	Sol. Chromium 4,600 p.p.m.
.. ..	..	T50(A)	CP.72/20	Yellow	Sol. Chromium 27,600 p.p.m.
.. ..	..	T55(A)	CP.72/26	Green	Sol. Chromium 4,800 p.p.m.

*N.B.* Under the Regulations the amount of Lead shall not exceed 5,000 p.p.m. and the amount of Soluble Chromium shall not exceed 250 p.p.m.

## SECTION V

### THE PHARMACY AND POISONS ACT, 1933

The two samples submitted, Insecticide, County A.17, PP.72/1, and Windshield Cleaner, County 62 B/Q, PP.72/2, had compositions that were not subject to restrictions under the Act.

## SECTION VI

### TRADE DESCRIPTIONS ACT, 1968

#### LAWN FERTILISER

County TDB.35, TD.72/1, was a compound fertiliser containing the selective weed killers, Mecoprop and 2.4 D.

It was suspected that its use on a lawn had caused illness in a pet dog, but the composition was normal. It is suspected, however, that some dogs may be susceptible to these substances and it is advised that animals should be kept away from such treated lawns. A statement to that effect on the packet would be desirable.

DETERGENT – STERILISER

County TDB.36, TD.72/2, contained 3.0% of cetyl trimethylammonium bromide.

BEST STABLE MANURE

Stoke-on-Trent TD.72/3 had the characteristics of a composted stable manure and had probably been used as a mushroom compost.

It had the following composition, as compared with a known Stable Manure.

	Sample TD.72/3		Stable Manure TD.72/4	
	As received	Calc. on dry matter	As received	Calc. on dry matter
Water .. ..	68.10%	—	81.50%	—
Mineral Matter ..	19.40%	60.8%	4.70%	25.4%
Organic Matter ..	12.50%	39.2%	13.80%	74.6%
N .. ..	0.58%	1.8%	0.50%	2.7%
P <sub>2</sub> O <sub>5</sub> .. ..	0.39%	1.2%	0.30%	1.6%
K <sub>2</sub> O .. ..	0.46%	1.4%	0.57%	3.1%

FREE RANGE NEW LAID EGGS

County, SCC/B.38, TD.72/5, consisted of twelve eggs, which were examined for quality by ‘Candling’, by Flotation in Water, by breaking onto a level plane sheet of glass and observing the height and spread of the white and by odour.

The 12 eggs were classified as follows:

- Eight were of 1st Quality and of good internal quality.
- Two were of 2nd Quality and of fair internal quality.
- Two were of 2nd Quality and of poor internal quality.

All were considered however, to be fit for use.

TURPENTINE SUBSTITUTE

County TDA 2(N), TD.72/6, was submitted with the complaint that it was ‘ordinary petrol’.

It consisted of a petroleum fraction of composition very similar to that of B.S.I. “White Spirit”.

TURPENTINE SUBSTITUTE

County TDA 3(N), TD.72/7, submitted with reference to the previous sample.

RUSTPROOF STEEL SHELVING

County TD.B.39, TD.72/8, consisted of mild steel sheet with a coating of zinc on the exposed surfaces. Would have been more accurately described as “rust resistant.”



KETTLE (reference also Colouring Material M.72/117)

County B.41, TD.72/9, was an aluminium kettle with a blue anodised finish. An error in the application of the finish had resulted, however, in the blue dye remaining partly soluble so that water boiled in the kettle became blue.

DOG FOOD

A sachet of dried dog food, Newcastle B.C., TD.72/10(A), was claimed to be equivalent to a canned dog food of the same brand, Newcastle B.C., TD.72/10(B).

The two foods contained the following amounts of nutrients.

	<i>Sachet</i>				<i>Can</i>			
Mineral .. .. .	9.7	gms	..	16.9	gms			
Fat .. .. .	24.7	„	..	34.7	„			
Protein .. .. .	34.9	„	..	40.8	„			
Carbohydrates .. .. .	67.9	„	..	17.8	„			
<hr/>								
Total Nutrients .. .. .	137.2	„	..	110.2	„			
<hr/>								
Calcium .. .. .	1.44	gms	..	2.7	gms			
Phosphorus .. .. .	1.80	„	..	4.9	„			
Vitamin B <sub>1</sub> .. .. .	0.36	„	..	0.13	„			

It was considered that, taking into account the variation that might be expected to occur, that the two feeds were approximately equivalent.

WASHING POWDER

Newcastle B.C., TD.72/11, was alleged to have caused skin irritation. It was of normal composition, although the amount of perborate, 12% was somewhat higher than usual, but was in accordance with a claim for ‘oxygenating power’.

It was noted, however, that the directions for use on the packet stated the amounts to be used for particular purposes but did *not* state to what volumes of water these amounts were to be added. Consequently it could easily happen that the actual concentration used was too high and persons with sensitive skins might suffer adverse effects.

SECTION VII

OTHER SAMPLES

ATMOSPHERIC POLLUTION

94 Lead Peroxide Cylinders and the contents of 218 Rain Gauges were submitted for examination in 1972, as listed in Section 1.

The Lead Peroxide Cylinders are used to determine the amounts of sulphur gasses in the atmoshpere – the Lead Peroxide reacts with and fixes the sulphur, which is then determined by analysis.

Rainwater is measured to determine the actual rainfall and is then examined for soluble and insoluble matter.

# LEAD PEROXIDE CYLINDERS (Sulphur Pollution as mg. SO<sub>3</sub> per 100 sq. cm. per day)

Authority	Site Name and Number	No. of Samples	Lowest Month	Highest Month	Average
Aldridge-Brownhills U.D.C.	Brownhills No. 2	12	1.0	2.1	1.4
"	No. 3	12	0.35	1.0	0.6
Newcastle-under-Lyme R.D.C.	Keele No. 1	12	0.4	1.5	0.9
Rugeley U.D.C.	Site No. 9	12	0.25	1.0	0.5
Stone R.D.C.	Stone No. 9	11	0.30	1.5	0.7
"	No. 12	12	0.40	2.7	1.0
"	No. 13	12	0.2	1.3	0.9
"	No. 14	11	0.3	1.4	0.8

## RAINWATER GAUGES

Authority	Site Name and Number	No. of Samples	Average Rainfall (mm./day)	Average Solids Deposit (mg./sq. metre per day)		
				Undis-solved	Dis-solved	Total
Aldridge-Brownhills U.D.C.	Brownhills No. 2	12	1.7	61	55	116
"	No. 3	12	1.8	68	41	109
Cannock U.D.C.	Cannock No. 1	12	1.8	55	47	102
"	No. 4	12	1.7	47	47	94
"	No. 11	11	1.7	60	72	132
Cheadle R.D.C.	Cheadle No. 1	12	2.7	252	247	499
"	No. 2	12	2.7	102	208	310
Newcastle-under-Lyme B.C.	Newcastle No. 1	12	2.1	85	59	144
Newcastle-under-Lyme R.D.C.	Keele No. 1	12	1.8	28	41	69
Rugeley U.D.C.	Rugeley No. 17	12	1.8	93	55	148
Stone R.D.C.	Stone No. 3	11	1.1	36	30	66
"	No. 9	11	0.9	42	25	67
"	No. 20	12	1.3	58	50	108
"	No. 30	8	1.5	63	32	95
"	No. 36	11	2.2	60	82	142
"	No. 37	12	2.1	42	46	88
"	No. 38	12	1.3	64	37	101
"	No. 39	10	0.9	104	56	160
"	No. 40	12	2.1	53	83	136

## ROAD TRAFFIC ACT, 1972

Persons who may be charged with an offence under the Act are provided, by the Police, with part of the sample of blood or urine.

The County Laboratory provides a service whereby, such persons may, for a fee, fixed by the County Council, have such samples examined for alcohol content.

The right is reserved, however, to refuse such samples if they are excessively old, have been subjected to abuse or if the seal has been broken.

During the year, the following results were obtained. Except where stated otherwise, these were on samples on Blood.

<i>Lab. Ref.</i>	<i>Alcohol mg/100 millilitres</i>	<i>Lab. Ref.</i>	<i>Alcohol mg/100 millilitres</i>	<i>Lab. Ref.</i>	<i>Alcohol mg/100 millilitres</i>
A.72/1	.. 54	A.72/40	.. 108	A.72/78	.. 98
2	.. 88	41	.. 118	79	.. 142
3	.. 212	42	.. 16	80	.. 89
4	.. 103	43	.. 230	81	.. 107
5	.. 64	44	.. 57	82	.. 73
6	.. 173	45	.. 132	83	.. 74
7	.. 27	46	.. 60	84	.. 173
8	.. 200	47	.. 96	85	.. 140
9	.. 154	48	.. 75	86	.. 203
10	.. 147	49	.. 164	87	.. 54
11	.. 199	50	.. 112	88	.. 46
12	.. 101	51	.. 152	89	.. 92
13	.. 119	52	.. 65	90	.. 78
14	.. 23	53	.. 62	91	.. 210
15	.. 254 (Urine)	54	.. 64	92	.. 75
16	.. 49	55	.. 186	93	.. 59
17	.. 141	56	.. 132	94	.. 74
18	.. 54	57	.. 41	95	.. *
19	.. 99	58	.. 328	96	.. 179
20	.. 47	59	.. 144	79	.. 42
21	.. *	60	.. 72	78	.. 80
22	.. 52	60A	.. 104	99	.. 32
23	.. 140	61	.. 129	100	.. 70
24	.. 193	62	.. 47	101	.. 208
25	.. 154	63	.. 53	102	.. 216
26	.. 174	65	.. 64	103	.. 41
27	.. 126	66	.. 101	104	.. 232
28	.. 106	67	.. 68	105	.. 141 (Urine)
29	.. 40	68	.. 266	106	.. 82
30	.. 78	69	.. 56	107	.. 67
31	.. 24 (Urine)	70	.. *	108	.. 268
32	.. 65	71	.. 60	109	.. 82
33	.. 50	72	.. 184	110	.. 115
34	.. 85	73	.. 53	111	.. 73
35	.. 141	74	.. 107	112	.. 55
36	.. 106	75	.. 96	113	.. 77
37	.. 68	76	.. 73 (Urine)	114	.. 47
38	.. 51	77	.. 142	115	.. 129
39	.. 115				

\* Samples found to be not suitable for analysis.

The limits prescribed by the Act are 80mg of alcohol per 100 mls of blood and 107 mg of alcohol per 100 mls of urine.

## WATERS

### DRINKING WATERS

Of the 141 samples of drinking waters, 4 were reported as polluted. All were private supplies.

4 samples from two shallow wells in Cannock Rural District had very high amounts of Nitrate Nitrogen and which was considered to indicate some distant source of pollution – these waters are referred to in the next section of this Report.

### NITRATES IN DRINKING WATER

The bacteria present in the digestive system of infants of under 12 months of age differs from that of older children and adults. These bacteria are able to reduce Nitrate to Nitrite, which enters the blood-stream and reacts with the haemoglobin to form methaemoglobin.

Nitrite may react, also, with secondary or tertiary amines naturally present in some foods to form Nitrosamines – substances which are potentially carcinogenic.

The World Health Organisation limit for Nitrates (NO<sub>3</sub>) in water is 45 mg/l, equivalent to 10 mg/l of Nitrate Nitrogen.

9 samples received during 1972 exceeded this limit.



<i>Lab. Ref.</i>	<i>Source</i>	<i>Nitrate N</i>
W.72/120 ..	Newcastle R.D.C. (Whitmore) ..	12.7 mg/l
W.72/173 ..	Cannock R.D.C. (Mitton) ..	33.6 „
W.72/174 ..	„ „ „ ..	38.2 „
W.72/191 ..	Stone R.D.C. (Moddershall) ..	10.8 „
W.72/205 ..	„ „ „ ..	17.2 „
W.72/235 ..	Cannock R.D.C. (Mitton) ..	25.8 „
W.72/236 ..	„ „ „ ..	29.2
W.72/253 ..	Stone R.D.C. (Eccleshall) ..	11.2 „
W.72/479 ..	Cannock U.D.C. (Norton Canes) ..	13.2 „

All the above supplies were either private supplies or supplies to small communities.

## METALLIC CONTAMINATION

All routine samples of drinking waters have, for many years, been examined for metallic contamination and the Standards of the World Health Organisation applied.

### *Lead*

Lead is a cumulative poison and there is evidence that there is a link between chronic lead poisoning and mental retardation of children.

The W.H.O. limit is 0.1 mg/l, but which was exceeded by only one sample. Another sample from the same source had an amount of Lead equal to the W.H.O. limit.

<i>Lab. Ref.</i>	<i>Source</i>	<i>Lead</i>
W.72/333 ..	County (Leek) ..	0.10 mg/l
W.72/334 ..	„ „ ..	0.11 mg/l

### *Iron*

Traces of iron are present in most waters but there is no evidence that such traces are harmful – they may even be beneficial.

Amounts in excess of 0.3 mg/l will, however, effect the palatability of the water and may cause stains when washing clothes.

The W.H.O. considers that 0.1 mg/l is the “Highest Desirable Level” and that 1.0 mg/l is the “Maximum Permissible Level.”

The following waters contained iron in excess of the W.H.O. standard of 0.1 mg/l, but only those waters where the amount exceeded 0.3 mg/l were actually criticised.

Lab. Ref.	Source	Iron mg/l	
		Total	In Solution
W.72/14	Lichfield City (Lichfield) .. ..	2.00	—
W.72/15	County (Quarnford) .. ..	0.40	—
W.72/43	Cheadle R.D.C. (Private Supply) .. ..	0.16	—
W.72/139	Cannock R.D.C. (Great Wyrley) .. ..	5.00	0.24
W.72/154	Stone R.D.C. (Moddershall) .. ..	0.12	—
W.72/174	Cannock R.D.C. (Mitton) .. ..	0.60	—
W.72/219	Newcastle R.D.C. (Whitmore) .. ..	0.20	0.12
W.72/236	Cannock R.D.C. (Mitton) .. ..	4.50	0.28

Lab. Ref.	Source	Iron mg/l	
		Total	In Solution
W.72/255	Uttoxeter R.D.C. (Marchington) .. ..	0.16	—
W.72/268	Leek U.D.C. (Westwood) .. ..	0.20	—
W.72/270	Stafford B.C. (Stafford) .. ..	0.50	—
W.72/288	Stoke-on-Trent (Stoke-on-Trent) .. ..	40.0	Nil
W.72/289	Tamworth B.C. (Tamworth) .. ..	0.28	—
W.72/322	Leek R.D.C. (Quarnford) .. ..	3.00	0.50
W.72/363	Cheadle R.D.C. (Cresswell) .. ..	0.12	—
W.72/366	Cheadle R.D.C. (Ipstones) .. ..	0.20	—
W.72/380	County (Leek) .. ..	0.20	—
W.72/381	County (Leek) .. ..	0.16	—
W.72/394	Newcastle B.C. (Silverdale) .. ..	1.20	—
W.72/417	Uttoxeter R.D.C. (Netherland Green) ..	0.28	—
W.72/420	Newcastle B.C. (Silverdale) .. ..	1.80	—
W.72/423	County (Quarnford) .. ..	0.16	—
W.72/424	Stafford B.C. (Stafford) .. ..	1.60	0.24
W.72/459	Cannock R.D.C. (Wedges Mills) .. ..	0.20	—
W.72/485	Newcastle R.D.C. (Ashley Heath) .. ..	1.80	1.40
W.72/536	Leek U.D.C. (Leek) .. ..	3.00	0.12
W.72/549	Lichfield R.D.C. (Whittington) .. ..	0.32	—
W.72/569	Newcastle R.D.C. (Whitmore Heath) ..	0.70	—
W.72/580	Newcastle R.D.C. (Pipe Gate) .. ..	0.18	—

### Copper

Copper is not considered to be hazardous in the amounts that are now usually found in water supplies. The main disadvantage of Copper in water, is the resultant corrosion of galvanised fittings and aluminium utensils. Natural waters rarely contain copper, but the widespread use of copper plumbing has resulted in trace amounts being found in most domestic water supplies.

The World Health Organisation considered the “Highest Desirable Level” to be 0.05 mg/l and the “Maximum Permissible Level” to be 1.5 mg/l, but it has been the policy not to criticize a water unless the amount exceeds 0.3 mg/l.

26 samples contained Copper in excess of 0.05 mg/l but of these only 2 contained more than 0.3 mg/l, but did not exceed the W.H.O. maximum limit of 1.5 mg/l.

Lab. Ref.	Source	Copper mg/l
W.72/27 ..	Stoke-on-Trent (Stoke) ..	0.93
W.72/519 ..	Leek U.D.C. (Leek) ..	1.5

### Zinc

Zinc is rarely present in natural waters, but traces may appear in domestic supplies from the use of galvanised tanks and fittings.

The World Health Organisation places the “Highest Desirable Limit” at 5.0 mg/l and the “Maximum Permissible Level” at 15 mg/l.

Only 7 samples contained more than 1.0 mg/l and none exceeded the 5.0 mg/l limit, the highest amount found being 2.1 mg/l.

Manganese

Manganese occurs naturally in waters in some parts of the Country, usually in association with iron, and excessive amounts may effect the palatability of the water, cause turbidity and form deposits in the distribution system. Staffordshire is, however, not one of the areas where much trouble from Manganese is experienced and it does not, therefore, form part of the routine examination. Where, however, complaints of tubidity are received and in particular where this is associated with “black specks” in the water and this cannot be entirely accounted for by the amount of iron, then the Manganese content is determined.

Three such samples were found to contain Manganese.

Lab. Ref.	Source	Manganese	Iron
W.72/394	Newcastle B.C. (Silverdale) .. ..	0.60 mg/l	1.20 mg/l
W.72/420	.. ..	0.15 ”	1.80 ”
W.72/459	Cannock R.D.C. (Wedges Mills) ..	0.24 ”	0.20 ”

The World Health Organisation regards 0.05 mg/l as the “Highest Desirable Level” and 0.5 mg/l as the “Maximum Permissible Level”.

Fluoride

The Fluoride content of water samples is not usually determined unless specifically requested, but in order to gain information upon the presence of Fluoride in Staffordshire waters, selected samples are examined for Fluoride when time and circumstances permit.

Source	Fluoride (F) mg/l
Stoke-on-Trent (City) .. ..	0.25
.. .. (Meir) .. ..	0.25
.. .. (Longton) .. ..	0.17
Stafford Borough (Shugborough) .. ..	0.10
.. .. (Gnosall).. ..	0.25
.. .. (Milford).. ..	0.10
.. .. (Weston Jones) .. ..	0.20
Newcastle Borough (Chesterton) .. ..	0.15
.. .. (Silverdale) .. ..	0.20
.. .. (Longbridge Hayes) .. ..	0.04
.. .. (Cross Heath).. ..	0.07
.. .. (Wolstanton) .. ..	0.16
Cannock Urban (Hednesford) .. ..	0.10
.. .. (Norton Canes) .. ..	0.23
Cannock Rural (Wedges Mill) .. ..	0.25
.. .. (Wheaton Aston) .. ..	0.20
.. .. (Bishops Wood) .. ..	0.21
Cheadle Rural (Alton) .. ..	0.08
.. .. (Weston Coyney) .. ..	0.13
.. .. (Cheadle) .. ..	0.05
Leek Urban (Poolend) .. ..	0.15
, .. (Leek) .. ..	0.05



<i>Source</i>					<i>Flouride (F) mg/l</i>
Lichfield Rural (Hopwas) .. .. .	..	..	..	..	0.32
„ „ (Burntwood) .. .. .	..	..	..	..	0.10
Newcastle Rural (Keele) .. .. .	..	..	..	..	0.22
„ „ (Whitmore) .. .. .	..	..	..	..	0.12
Scisdon Rural (Stourton) .. .. .	..	..	..	..	0.08
Tamworth Borough (Hopwas) .. .. .	..	..	..	..	0.32
Uttoxeter Urban (Uttoxeter) .. .. .	..	..	..	..	0.21
Uttoxeter Rural (Marchington) .. .. .	..	..	..	..	Nil
„ „ (Quarnford) .. .. .	..	..	..	..	0.08

### *Cyanide*

In 1968 a paper, which originated from an English University, was published in a foreign journal and which stated that the authors were “concerned to find that our drinking water supplies are not generally tested for these (toxic) substances”. It is clear that the reference is to the U.K. since the paper quotes their findings on toxic substances, including Cyanides in the water supplies from 47 parts of the U.K.

The County Laboratory has always monitored drinking waters for those substances which conceivably could occur but had not, up to that time, examined waters on a routine basis for Cyanide. It may be noted that the normal purification treatment carried out by water undertakings could be expected to remove any cyanide, although the methods of treatment were not designed for that purpose.

Never-the-less it was decided, following the publication of this paper in 1968 to monitor all samples of drinking water for Cyanides, but *none* has ever been found. This has involved much additional laboratory work, but it proved to be of use when the cyanide-dumping scare arose and when it was later alleged by the same University that their investigations had found Cyanide in the water supply to four specified houses in Staffordshire.

### *Hardness*

Routine samples of drinking water are examined for hardness and are classified as follows:—

<i>Classification</i>	<i>Total Hardness CaCO<sub>3</sub>mg/l</i>				<i>Number of individual Supplies</i>
Soft .. .. .	..	..	0—49	..	2
Moderately Soft .. .. .	..	..	50—99	..	8
Slightly Hard .. .. .	..	..	100—149	..	7
Moderately Hard .. .. .	..	..	150—249	..	21
Hard .. .. .	..	..	250—349	..	16
Excessively Hard .. .. .	..	..	350—more	..	11

Details of the 17 samples from the 11 supplies that were reported as excessively hard are:—

Lab. Ref.	Source	Hardness CaCO <sub>3</sub> mg/l		
		Total	Carbonate	Non-Carbonate
W.72/22	Stafford B.C. (Gnosall) .. ..	420	252	168
118	" " " " .. ..	412	246	166
124	" " " " .. ..	412	246	166
262	" " " " .. ..	406	244	162
452	" " " " .. ..	414	248	166
173	Cannock R.D.C. (Private) .. ..	472	212	260
174	" " " " .. ..	426	84	342
235	" " " " .. ..	422	196	226
236	" " " " .. ..	408	86	322
362	" " " " .. ..	452	262	190
538	" " " " .. ..	544	180	364
539	" " " " .. ..	512	342	170
149	Stone R.D.C. (Private) .. ..	1,030	180	850
204	" " " " .. ..	470	418	52
205	" " " " .. ..	412	134	278
253	" " " " .. ..	386	182	204
289	Tamworth B.C. (Private) .. ..	398	246	152

Whether a hard water is good or bad for the health of the drinker is still a subject for much debate, what is beyond doubt, however, is that an excessively hard water can be very detrimental to a domestic plumbing system and a very decided disadvantage on washing-day.

#### AN EMERGENCY

A brief account of an Emergency Situation in which the County Laboratory played an important part is worthy of note.

Late one night the County Analyst was telephoned, at home (the County Analyst was also on annual leave at the time!) by the Police to state that a quantity of highly toxic substance had been reported stolen and that they had received an anonymous threat that a certain public water supply was to be attacked. Quick action by the Police located the reservoir concerned, the supply was shut off and a drum of poison recovered. Urgent action was necessary to identify the poison and to test the water supply.

The Police were told to take samples of the water and to bring them, and the suspect material, to the Laboratory. Staff were alerted, the Laboratory opened up and within 2 hours of the first message from the Police, the analysis had been completed and a Report that the water supply was safe was transmitted by Police Radio.

#### SWIMMING BATH WATERS

Of the 182 samples submitted, 96 or 53% were subject to some criticism. This is a high proportion but an improvement on the previous year in which the proportion of unsatisfactory samples was over 70%. These criticisms relate, in the main, to the pH and chlorine status of the water and there were few occasions in which there were indications of unsatisfactory biological quality.

The results are summarised as follows:

*pH and Alkaline Reserve*

The optimum pH range is 7.5–8.0. If lower, i.e. more acid, the free chlorine causes irritation to the eyes and other sensitive areas. If higher, i.e. more alkaline, unpleasant “woolly” odours are produced.

<i>pH</i>				<i>Number of Samples</i>
below 6.5	..	..	..	4
6.5–6.9	..	..	..	7
7.0–7.4	..	..	..	35
7.5–8.0 (Optimum)	..	..	..	110
8.1–8.5	..	..	..	23
above 8.5	..	..	..	2
				<hr/> 181* <hr/>

\*Excludes 1 sample submitted only for confirmation of an abnormally high free chlorine content.

The alkaline reserve should not fall below 100 mg/l, as CaCO<sub>3</sub>, and preferably should be in the region of 200 mg/l. Low pH values are associated with an inadequate alkaline reserve.

Details of waters with a pH below 7.0 are:

<i>Lab. Ref.</i>		<i>pH</i>		<i>Alkaline Reserve as CaCO<sub>3</sub> mg/l</i>
W.72/57	..	6.9	..	18
87	..	6.6	..	15
175	..	6.6	..	24
395	..	6.8	..	44
462	..	5.0	..	6
493	..	6.3	..	21
564	..	5.1	..	10
570	..	5.8	..	16
571	..	6.5	..	56
595	..	5.3	..	20
603	..	6.5	..	22

High pH readings are usually associated with excessive alkaline reserve, but may be influenced by the type of alkaline present.

Details of waters with pH over 8.5.

<i>Lab. Ref.</i>		<i>pH</i>		<i>Alkaline Reserve, as CaCO<sub>3</sub> mg/l</i>
W.72/25	..	8.8	..	236
415	..	8.7	..	236

RESIDUAL CHLORINE

The amount of free residual chlorine usually recommended in the past was 0.2–0.5 mg/l but an amount as low as 0.2 mg/l could be considered as satisfactory only at the point when the water leaves the bath. Water entering the baths with 0.2 mg/l of free chlorine would have little or none left before it left the bath.



Modern practice favours an amount of free chlorine of 0.5–2.0 mg/l, giving a greater margin of safety and the capacity to meet a sudden pollution load. Complaints of excessive “chlorine odour” and irritation of the eyes are unlikely at this level of chlorine if the pH is controlled at the recommended range of 7.5–8.0.

The results are summarised as follows:—

<i>Free Residual Chlorine – mg/l</i>				<i>Number of samples</i>
less than 0.2	..	..	..	8
0.2–0.4	..	..	..	36
0.5–2.0	..	..	..	111
above 2.0	..	..	..	26
				<hr/> 181* <hr/>

\*Excludes one sample submitted for examination of suspended solid matter only.

The 8 samples with less than 0.2 mg/l of free chlorine, which included 2 with no free chlorine, were reported as unsatisfactory.

Of the 26 samples with more than 2.0 mg/l of free chlorine, and the subject of adverse comment, 15 had 4.0 mg/l or more.

In four cases where the amounts of free chlorine ranged from 22–41 mg/l, warnings were issued that the baths should not be used. How such large amounts come to be in the water is a little difficult to understand but it is believed to be due to a misinterpretation or misunderstanding of the simple instruments used by swimming bath staff to measure the free chlorine content. These instruments rely upon the colour produced when a reagent is added to a sample of the water. but it would appear that when a moderate excess of free chlorine is present, outside the range of the instrument, the colour becomes less intense, instead of more, giving a false impression that more chlorine should be added – which then gives even less colour and yet more chlorine is added, until it is eventually realised that something has gone wrong.

### *Combined Residual Chlorine*

In the presence of ammonia and other nitrogen containing substances, such as are introduced by urine, chlorine enters into combination to form chloramines and other complex substances. The formation of such substances appears to be favoured by a low pH.

Chloramines are now known to have a much lower bactericidal action than free chlorine and their presence is now regarded as evidence of the presence of organic matter and inadequate purification.

With clean waters, the ratio of Combined to Free Residual Chlorine has been found to be 1:1 or less. A ratio of more than 2:1 is regarded as evidence of some build up of organic matter in the water. If the ratio exceeds 3:1 fairly drastic remedial action is necessary. A water containing excessive organic matter may still have sufficient free chlorine to be *safe* for bathing but there are obvious ethical objections to swimming in diluted urine, even if it is sterile.

Of the 181 samples examined for chlorine content, 28 had a Combined to Free Residual Chlorine Ratio in excess of 3.0. Of these, 19 had less than 0.5 mg/l of free chlorine and only one had more than 1.0 mg/l of free chlorine (actually 1.2 mg/l free chlorine and 5.9 mg/l of combined chlorine).

## EFFLUENTS

Most of the samples examined were taken routinely as a check on the operation of existing works and in assessing the need for new works.

A sewage treatment plant is a finely balanced biological system which can be upset by an unauthorised discharge into the public sewers. Three such incidents were investigated.

Crude sewage from one works was found to contain 740 mg/l of Copper and from another works 1.5 % of Sulphuric Acid. An abnormally high solids content in a sewer was found to contain a large amount of potato starch and which was traced to the effluent of a potato processing plant – which contained 1,300 mg/l of suspended solids, 11,000 mg/l of dissolved solids and had a Biochemical Oxygen Demand of 3,250 mg/l.

Two samples of the emission from a pipe entering a stream near an animal by-products factory were grossly polluted, contained blood and had Biochemical Oxygen Demands of 180 and 380 mg/l. The contaminated stream had a Biochemical Oxygen Demand of 290 mg/l.

A number of samples of run-off water from an industrial tip, where cyanide had been dumped, were examined for cyanide but none was detected.

One tip effluent was found to contain phenols and another, sulphides.

## OTHER WATERS

The fracture of an oil pipe line which crossed the gathering ground of a public water supply produced an emergency situation. A very large quantity of petroleum escaped into the ground and the supply was in danger of being contaminated.

49 samples of water from test bores and excavations at the site of the spillage and of the supply, were examined and although the presence of petrol in the soil was confirmed in parts of the area, none gained access to the supply. This work is still continuing.

Water from a pool near a golf course that was being renovated, was examined for paraquat herbicide but none was detected.

A sample of drinking water for cattle, rather surprisingly contained 2 mg/l of methyl salicylate (oil of Wintergreen) but the manner in which the sample had been taken was a little suspect.

The remaining samples were concerned with the investigation of pollution of streams and with the giving of advice to local industrial and other organisations upon boiler and other process waters.



## MISCELLANEOUS SAMPLES

### COUNTY COUNCIL

#### *County Architect*

##### *M.72/20 – Copper Pipes*

Severe corrosion of copper U-bends in waste pipes had resulted in perforation of the pipes. The U-bends had been used to fabricate S-traps to washbasins and it was evident that a corrosive substance, probably hydrochloric acid, had been used to clear accumulated deposits in the traps and which had resulted in corrosion of the copper.

#### *County Education Officer*

##### *M.72/33, 34, 94 – Detergents*

Submitted in relation to purchasing contracts.

##### *M.72/123, 124 – Liquid Soaps*

A comparison was made between the composition of a plain liquid soap and one which claimed to contain lanolin and to have antiseptic properties. The presence of lanolin and pine oil disinfectant was confirmed in the latter but the amounts present were of doubtful significance.

#### *County Estates Officer*

##### *M.72/115 – White Powder*

White powder which had appeared in a dwelling house consisted mainly of Magnesium Sulphate, probably produced by efflorescence of the brickwork or a cement made from a magnesium limestone.

#### *County Medical Officer*

##### *M.72/99 – Deposit from Swimming Bath*

Consisted of water-hardness solids and diatomaceous earth from the filtration plant.

#### *County Planning Officer*

##### *M.72/121 – Sewage Sludge*

Contained complex cyanides and traces of Lead, Copper, Zinc, Nickel and Chromium and evidently a waste from a plating works.

#### *County Surveyor*

##### *M.72/122 – Cut Back Bitumen*

The sample satisfied the distillation requirements of the specification.

##### *M.72/154/171 – Mortars*

Submitted for Calcium content.

##### *M.72/155 – Antifreeze*

The sample satisfied the requirements of the specification.



*Stoke-on-Trent*

*M.72/12 – Bath Cube*

.Suspected of being the cause of skin irritation, but was found to be of normal composition.

*M.72/93 – Soap*

The soap was of normal composition.

*M.72/55/56 – Chrome Cleaner*

It was alleged that the Chrome Cleaner was ineffective.

Tests showed that it was effective when used as implied by the directions that “Regular use maintains the surface in prime condition”. It was not so effective in removing accumulated dirt and rust from neglected chromium plating and analysis showed that it contained no abrasive ingredients.

A comparison with other well-known Brands produced some surprising results. One Brand, in particular, was extremely efficient in cleaning neglected plating, but it contained an abrasive that could scratch glass and it is doubtful if any plating would withstand its use for very long.

*Newcastle Borough*

*M.72/114/118 – Slug Pellets*

It was alleged that slug pellets had caused illness in a dog.

The pellets contained 2.7% of Metaldehyde, which is normal, and it was considered that the warning notice on the packet that the pellets should be kept away from domestic animals was an adequate caution for their use.

*M.72/156 – Grit and Dust*

Grit and Dust recovered from the window ledges of a row of houses contained 54% of magnetic iron oxide (Fe<sub>3</sub>O<sub>4</sub>) the remainder consisting of siliceous matter and fuel ash.

*M.72/159 – “Jelly”*

A brown “jelly” removed from the walls of a sewer in which an explosion had occurred consisted only of micro-organisms.

*Stafford Borough*

*M.28/98 – Super Peat*

The peat had the following composition.

Water	..	..	..	..	..	79.3%
Organic Matter	..	..	..	..	..	12.2%
Inorganic Matter	..	..	..	..	..	8.5%
Nutrients, calculated on the dry matter included:						
N	..	..	..	..	..	1.0%
P <sub>2</sub> O <sub>5</sub>	..	..	..	..	..	0.4%
K <sub>2</sub> O	..	..	..	..	..	0.05%
Ca	..	..	..	..	..	10.9%
Mg	..	..	..	..	..	0.8%

The amounts of nutrients, with the exception of Nitrogen, for which no claim was made were higher than in ordinary garden peat, but the amount of  $K_2O$  was considered to be out of balance with the other nutrients.

*M.72/134 – Insect Larvae*

The larvae were identified as those of a fly, *Hydrotaea Dentipes*, a fly of the same family as the common house fly. These larvae, which were found in a carpet, are known to prey upon the larvae of another fly (*Scenopinus* or window flies) which, in turn, prey upon the larvae of the common clothes moth.

*Cannock U.D.C.*

*M.72/138 – First Aid Dressing and Ointment*

Associated with the Dressing were some 65 Blowfly larvae (*Calliphora*). It was alleged that the larvae had come from the ointment but there was no evidence of such contamination. The ointment contained honey, a most unusual ingredient, and a dressing containing such ointment may have proved to be attractive to a blowfly as a suitable site for egg laying.

*Aldridge-Brownhills U.D.C.*

*M.72/58 – 66 – Atmospheric Pollution*

A follow up investigation into acid fumes in the atmosphere (ref. 1971 Report M.71/157-164). Some small degree of acidity was detected but the evidence was inconclusive.

*M.72/95 – 97 – Suspect Substances*

Small amounts of Cyanide, 0.3% and 1.2% as NaCN, were detected in two of the substances, but the third was free from cyanide.

*Cannock R.D.C.*

*M.72/125 – Insects*

Insects found in a house comprised 28 Lesser Houseflies (*Fannia Canicularis*) 2 Bluebottles (*Calliphora Erythrocephala*) and 1 Stable Fly (*Stomoxys Calcitrans*).

*M.72/133 – Atmospheric Pollution*

Consisted of very light coke-like particles, containing approximately 30% of mineral matter.

*M.72/153/168-170 – Material dumped in Field*

Consisted of light coloured slabs and which appeared to have been the residue from a filter press.

A very detailed examination showed that it was a mixture of organic matter, including paper, fats and animal matter, and calcium carbonate, with traces of cyanides, chromium, nickel, copper, zinc, aluminium and iron.

It was eventually traced to another local authority sewage treatment plant where a special treatment was carried out to remove industrial waste from the sewage. A contractor was employed to remove the solid residue but it appeared that the contractor has misunderstood his instructions.

*Kidsgrove U.D.C.*

*M.72/50-53/100/132 – Material from Sewer (ref. W.72/352).*

Material found blocking a sewer was identified as potato waste.

*Lichfield City*

*M.72/145 – Waste Deposit*

Material found on the strainer in a domestic water tap consisted of compounds of Iron and Copper.

*M.72/172 – Atmospheric Pollution*

A deposit consisted mainly of sand and vegetable debris together with some fuel ash and magnetic particles.

*Seisdon R.D.C.*

*M.72/117 – Colouring Materials (Ref. also Kettle TD.72/9)*

Samples of the dyes used in the colouring of domestic aluminium hollow-ware were submitted following a complaint of leaching of the dye by water boiled in a coloured aluminium kettle. The dyes were those normally used for the purpose and were in compliance with the specifications.

*Stone R.D.C.*

*M.72/139 – Atmospheric Pollution*

Dust had the characteristics of the emission of a furnace burning coal.

*Tamworth Borough*

*M.72/119 – Orange Squash*

It was required to certify, for export purposes to an Arab Country, that the Orange Squash contained no Cyclamates and no Alcohol.

*M.72/77/78 – Atmospheric Pollution*

Solid matter consisted in the first case (M.72/77) of silica with a little iron oxide and fuel ash. The second (M.72/78) consisted mainly of iron oxide with a little fuel ash.

*M.72/146 – Atmospheric Pollution*

Deposits on vegetation consisted of mineral matter together with dark growths of Cladosporium and Fusarium type moulds.

The mineral matter was mainly siliceous matter but contained 15.6% of Aluminium and 1.5% of Fluoride.

*M.72/8-10, M.72/21-29, M.72/46-48, M.72/88-90, M.72/111-113 –  
Smoke Filters*



*M.72/2-7, M.72/21-26, M.72/40-45, M.72/67-72, M.72/84-87,  
M.72/104-109, M.72/164-167, M.72/173-176 – Deposit Gauges  
M.72/11, M.72/30, M.72/49, M.72/76, M. 72/91, M.72/110 – Liquid  
from Volumetric SO<sub>2</sub> Apparatus*

Samples examined in a scheme to monitor for atmospheric pollution due to industry, with particular reference to fluorides.

*Private*

*M.72/19P – Sodium Hypochlorite Solution*

Contained 13.4% w/w of available chlorine

*M.72/31P – 32P – Distilled Water*

The samples satisfied the requirements of the British Pharmacopoeia for Purified Water.

*M.72/36P-37P – Water*

Samples to check the efficiency of a filter designed to remove traces of oil from water.

*M.72/54P – Tape-Worm tablets for cats*

The composition accorded with the declaration of 500 mg of Dichlorophen.

*M.72/103P – Insect*

Identified as a female cockchafer (*Melolontha Melonlontha*).

*M.72/126P-13P – Garden Soil*

The new occupier of a house was dismayed to find that nothing would grow in the garden.

Experiments confirmed the occupiers suspicion that the previous occupier, who evidently disliked gardening, had treated the area with a long-acting herbicide (Weedkiller).

Analysis indicated the presence of a substance of the "Bromocil" type – which is noted for its persistence.

The occupier had to be advised that there was no quick remedy, short of the complete replacement of the earth down to the sub-soil level.

*M.72/135P-137P, M.72/147P8149P – Soil from Excavations*

Examined in relation to a spillage of petrol from a fractured pipeline.

*M.72/150P-153P – Prepared Vegetables*

Submitted for determination of Sulphur Dioxide Preservative.

*M.72/157P – Insect*

Identified as a Strawberry Weevil (*Otiorrhynohus Rugosostraitus*)

*M.72/177P – Suspected Rodent Excreta*

Identified as the excreta of a small insect eating animal, such as a shrew.

## *Toxicology*

Toxicological work was greatly increased during 1972 by two factors – a news report of poisonous seeds in jewellery and toys, and the Poisonous Wastes Act.

### *Poisons Seeds*

Following the publication of a news item in South West England of poisonous seeds being found in jewellery and toys, Public Analysts in all parts of the Country were inundated with samples for examination.

Staffordshire County Laboratory received 81 samples, comprising 89 separate items and of these 35 consisted of, or included, the seeds of *Abrus precatorius*, commonly known as Prayer or Rosary Beads.

*Abrus precatorius*, a member of the pea family, is a woody climber widespread in the tropics. It was cultivated in Europe as a curiosity in the 16th Century and has been imported in quantity from West Africa from the 17th Century.

The attractive appearance of the seeds, which are nearly globular in shape, 5-7mm × 4-5mm, bright scarlet in colour with a black 'cap' over about one quarter of the total area, has encouraged their collection and use in local native crafts and they become popular for rosaries ("precatorious" means relating to prayer).

The poisonous principle is an alkaloid, abrine (N-methyl tryptophane) – a very powerful poison which causes agglutination of the red blood cells.

It is stated that the whole seeds are harmless, since the hard seed coat is not broken down by the digestion system, but there is a hazard with seeds that have been pierced for necklaces.

Evidence of the long usage of these seeds was provided by a very fine antique gold brooch that incorporated several of the seeds in the design.

### *The Deposit of Poisonous Wastes Act, 1972*

There was much concern following reports of toxic wastes being dumped in various parts of the Country and The Deposit of Poisonous Wastes Act, 1972 was rushed through Parliament in an attempt to meet the situation. Although a move in the right direction, the provisions of the Act leave much to be desired and there is now promise of more effective legislation.

Most of the work of the County Laboratory, under the Act, has been of an advisory nature, but a number of visits to sites have been made and 17 samples of suspect materials were examined.

Five samples of tip run-off (PW.72/2-6) were examined for Cyanide and toxic metals. An "Acid Copper Liquid" (PW.72/1) contained 11% w/v Sulphuric Acid and 0.3% of Copper.

Seven samples taken at an industrial tip (T.72/7-13) included materials from drums identified as Cyanide and Lead Chromate.

Drums on another tip (T.72/6) were found to contain only a mineral oil based lubricating grease.

Material in a drum found at a disused mine (T.72/5) was identified as calcium sulphate and was probably a waste from plaster manufacture.

A drum (T.72/58) labelled 'Cyanide' and found by the Police was in fact completely empty, apart from a little rainwater.

#### *Other Toxicology*

##### *T.72/98/98/99/100/101 Contamination of Water Supply*

Materials submitted in connection with a threat to a public water supply. The contents of a plastic container was identified as a 20% solution of "Paraquat" – herbicide commonly known under the trade name of "Gramoxone" .

##### *T.72/107P – Packing Material*

A packing material was thought to have been contaminated by Cyanide, but none was detected.

##### *T.72/96P – Cooked Food*

An allegation that Wafarin had been put into the food could not be substantiated.

##### *T.72/3P – Fish Food*

It was stated that ornamental fish had been killed by the food, but extended tests failed to fault the food.

##### *T.72/106P – Cat Food*

The illness of a cat was attributed to a can of Cat Food but no abnormality or contamination was found.

##### *T.72/1P-2P – Himalayan Sun Bear*

It was suspected that the death of the bear was due to the malicious giving of a barbiturate drug, but none was detected in the blood or stomach contents submitted.

##### *T.72/4P – Foxhound*

Strychnine and Alpha-Chloralose were sought in the stomach of a foxhound, but were not found.

##### *T.72/14P-16P – Dog*

A suspicion that Phosphorus or Zinc Phosphide had been administered to the dog was not substantiated by an examination of the liver and stomach.

##### *T.72/102P – Labrador Dog*

Vomit was examined for Cyanide and Warfin, but was not detected





